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The
Industrial and Commercial Revolutions in Great Britain during the Nineteenth Century

The Economic Development of the British Overseas Empire

By

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TO

C. M. KNOWLES

PREFACE

THE remarkable economic achievements within the Empire during the past century have remained largely unknown because no one could at present obtain even a nodding acquaintance with the subject who has not got access to certain large libraries.

A great deal has been written about self-government, but very little about the hacking down of the forest or the sheep rearing or the gold mining which made Canada, Australia, and South Africa into world factors and which provided the necessary money for self-government and alone made it possible. Volumes have appeared about the military exploits in India, but very little about the struggle with the overwhelming forces of nature which took shape in the unromantic guise of " Public Works ". Yet the railways and irrigation works transformed our greatest dependency, conquered famine, and created a nationality.

The fierce duel between man and the insect, in which man is beginning to win, and the struggle between the engineer and the stupendous obstacles arrayed against him have altered all colonial values. Regions previously impenetrable are now opened by railways ; products, previously non-transferable, are in daily use in our kitchens. Deserts and prairies have been turned into corn-lands, and British bread is made sometimes of wheat from the great canal colonies of the Punjab and sometimes from wheat grown near the snow-line of the Arctic. It is often spread with margarine made from palm-kernels of Nigeria, or from the coco-nuts of Ceylon, or with genuine butter from Australia or New Zealand. And yet the story of the effort and organization necessary to grow, sell, transport, and pay for these products, brought from all over the world, has never been told.

Of all humanitarian movements the suppression of the slave trade has been the most remarkable. Immense sacrifices of men and money were made to accomplish this, and yet it was never really effective till the railways provided an alternative form of transport to the slave carrier. The history of this again is unwritten.

Most people are aware of the emigration from the United Kingdom which gave an English impress to parts of three continents. Few people, however, seem to realize how important a part both Indian and Chinese emigrants have played in the development of the Empire, although the King rules over a miniature Chinese Empire in Malaya and a miniature Indian Empire in the West Indies. There have been, in fact, in the past century three mother countries of the British Empire, i.e. the United Kingdom, India, and China, but the story of the two last is at present buried in numerous reports. I have attempted to set down the outlines of these things in the following pages.

If the British people are to understand the colonial point of view, and if they are faithfully to discharge their trust with regard to the millions of coloured races under their rule, it is essential that they should know something of the economic history of the various parts of the Empire. Practically all history in new countries is economic history, and people never move very far from their history in one generation. Tradition is very strong, changes are cumulative and usually slow. Forms of government may alter, but people do not take rapid jumps in economic matters. It is evolution, not revolution, that the economic historian chronicles.

One fact emerged as I worked at the subject and that was the enormous and growing importance of the British Tropics. Leaving out India, they have in themselves become almost a new Empire within the last forty years, and it was borne in upon me that the race that controls the Tropics will control the most important economic resources of the world in the coming century. Hence it is desirable for Englishmen to know something about the history of their tropical possessions.

Accordingly I have divided the two volumes into three parts, the first of which deals with the Empire as a whole and the second with the Tropics and Sub-tropics. These are contained in the present volume. The third part, in which will be found a sketch of the economic histories of Canada, Australia, New Zealand, the Union of South Africa, and Rhodesia, comprises the second volume, that is to say, the first volume envisages the development of the primitive and mediæval worlds within the British Empire and the second the economic history of the modern nations of European origin.

In surveying the economic development of the British Tropics I have dealt with their problems from a comparative standpoint, partly because it has enabled me to bring out the similarity of tropical questions in countries which vary so widely and partly because I was thereby enabled to stress some of the salient and economic features of those tropical regions which I have not been able to treat in detail. During the past century India was, from the economic point of view, the most important part of the Overseas Empire, and she still occupies that position if one regards the figures of her trade, population, and resources. I have, therefore, dealt with her economic history at some length, as serious economic histories of India in the nineteenth century are conspicuous by their absence.

In my second volume, which is already partly written, I have pursued the same plan, that is, I have preceded the history of each particular Dominion with a comparative study of the problems of them all in order to bring out their similarities and divergencies, for it is an article of my faith that all modern economic history should be treated on comparative lines. No country can now live to itself. I have reserved for the second volume the history of emigration and preferential commercial relations, as in the past century they mainly affected the self-governing regions. I have also deferred the bibliography to the end of the second volume.

These books really owe their origin to the fact that the University of London, with its usual initiative, broke new ground when it made the Economic Development of the British Empire into a compulsory subject for its Bachelor of Commerce degree. It fell to my lot to lecture on the Economic Development of the Empire at the London School of Economics and I found my task almost hopeless in the absence of books that could be given to my students.

When asked by the University Commerce Bureau to draw up a short list of books on the subject for the guidance of the external student, I found that in the smallest list I could produce there were references to parts of no less than seventy books, reports, and articles; and this by no means covered the ground. Most of them were out of print.

As I became immersed in the economic history of the Empire I remembered a saying of my great master,

Dr. Cunningham, " If you want a subject to live you must write a textbook for it." By this he meant that someone must first map out the land and then the details would get filled in by special studies and the book itself would be contradicted and amplified and so the subject would grow. Such a book covering the general ground I have now tried to provide. I am hopeful that the intensive study of particular parts of the Empire may sooner or later be undertaken by my students and others. For example, Mr. McPhee, one of my research students, is writing his thesis for the Ph.D. on the Economic History of British West Africa in the last half-century. But the field is boundless, and I can promise those who enter it that they will not have one dull hour. It is a tale of new worlds in the making.

The chief difficulty of the work has lain in the scattered and patchy nature of the material and the fact that the economic history of most regions is absolutely unwritten. Those who know so rarely condescend to write. Hence I have quoted freely from articles and speeches which I considered would be inaccessible to those who could not consult a large library. If the distinguished colonial official has not died of the climate or the change to England, he is often too sick of the Tropics to tell their story, involving as it does an account of his own achievements. If only each retiring governor would set down a perfectly unvarnished non-tactful account of the country as he found it and left it, explaining the problem as he saw it and his real opinion of the Colonial Office, the merchants, and the British public, the task of the mere professor would be both pleasant and profitable. The Dominions seem at present too busy making economic history to find time to write it. If only some of the Colonial universities would devote their energies to collecting material for their economic history, they would preserve much valuable material which will soon disappear. The original pioneer with his endless story of hardship is a boring person to listen to, with his animadversions on the slackness and sloth and deterioration of the present generation, but he is an admirable historical document for anyone who can separate with discrimination fact from fiction.

In a book which ranges from slavery to Factory Acts, from cold storage to ticks and mosquitoes, from peasant cultures to plantation products, from bush paths to railways, there are bound to be many gaps. I shall be grateful to anyone who fills them.

After all, one of the most important parts of the British Empire is Great Britain itself. The economic changes in the Overseas Empire cannot be properly understood unless the corresponding development at the centre is grasped. I have, therefore, tried to make these volumes fit into the story as told in my " Industrial and Commercial Revolutions in Great Britain in the Nineteenth Century ".

It is a pleasant task to acknowledge something of what I owe to my colleagues and others. In every case where I have asked for help it has been given in full measure, pressed down and running over. Those I have consulted have gone out of their way, and have given themselves endless trouble to elucidate any point on which I consulted them. I regret for their sakes, even more than for my own, that the book is not a better monument to their kindness. In any case my errors are due entirely to myself, that there are not more is due to my friends.

I must, however, especially acknowledge my indebtedness to my Chief, Sir William Beveridge, Director of the London School of Economics, who read over my manuscript in its earliest stages and by his valuable criticism caused me to alter my conception of the whole book.

Mrs. Ormsby, of the Department of Geography, who also toiled through a large portion of the manuscript, has kept me straight on many matters on which she is an expert.

Mrs. Anstey, of my own Department, has on many occasions placed her special knowledge of the economic side of Indian development at my disposal.

Mr. Stephenson has been a mine of information on his own important subject of railways, but, unlike most mines, there has been no difficulty in working it.

Mr. Brown, of the Statistical Department, has kindly drawn up the table on the population, extent, and trade of various parts of the Empire to be found in the Appendix. Thus there is " division of labour " at the London School of Economics.

To Sir John Cumming, Mr. W. H. Moreland, Sir Charles Lucas, Sir Frederick Lugard, the late Sir Sydney Russell Wells, Mrs. George, Professor Gutteridge, Professor Sargent, and many others I owe my most grateful thanks for help on special points. I am much indebted also to Miss Blackburn for her careful and accurate typing from the roughest drafts submitted to her. Without Mr. Headicar and the Library Staff of the London School of Economics my task

would have been far more difficult. In their unwearied search after Colonial and Indian reports about which I could only give vague directions, but which they nevertheless invariably produced, they brought many other authorities to my notice of which I was ignorant. I have also much appreciated their zeal in keeping me informed of new publications on the subject.

L. C. A. KNOWLES.

KILLAGORDEN,
TRURO, CORNWALL.

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NOTE

The companion volume to the present book will contain (1) *A Comparison of the Economic Development of the Self-Governing Areas,* (2) *The Economic Evolution of Canada and Newfoundland, Australia and New Zealand, Union of South Africa, and Rhodesia.*

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BOOK ONE

THE EMPIRE AS A WHOLE

BOOK ONE

SYNOPSIS OF PART ONE

Economic Stages in the Development of the Overseas Empire

I. *An Empire of Outposts*, 1598–1763.

(*a*) Trading expansion in the East and West Indies, and in West Africa for slaves.

(*b*) Racial expansion in North America.

(*c*) Policy determined by mercantilist theories. Trade and shipping restrictions in return for defence and preferences.

II. *Continental inland expansion*, 1763–1870.

Quebec, 1763; Bengal, 1765; Loss of the United States, 1783; Inland penetration by loyalists from the United States by the St. Lawrence, 1783 (Ontario); New South Wales, founded 1788; Inland penetration, 1813.

Commodity regions needing transport, Canada and India; Railways, 1850 India, 1852 Canada; Pastoral regions with self-conveying animals; Australia and the Union of South Africa; Railways late.

Impetus to inland penetration; the industrial revolution in England and demand for wool and gold. Policy; self-government to racial colonies from 1847; free trade and no preferences; unpopularity of colonies.

III. *The British Empire as a world power*, 1870 *to present day*.

(*a*) New characteristics; Colonial nationalism; tropical expansion among primitive peoples; constructive imperialism.

(*b*) Events introducing new colonial era ; Federation of Canada, 1867–71 ; Suez Canal, 1869 ; Defeat of France by Germany, 1870.

(*c*) Economic factors revolutionizing imperial development.

(1) *Railways, Steamships, and Telegraphs*

(*a*) Railways meant cheap long distance transport ; Importance of cheap steel ; Defiance of such hindrances to penetration as insects, rapids, seasonal climatic disturbances, mountains, and deserts.

(*b*) Steamships ; compound engines, surface condenser, mechanical appliances at docks, larger ships meant fall in freights ; Specially important to remote places. Liners and emigrants. Small traders and parcels traffic.

(*c*) Telegraphs ; Transactions shortened business less speculative, intermediaries eliminated.

(2) *Cold Storage*

Refrigeration made carcasses valuable, also dairy products, improved health ; beginning of industrial enterprise in freezing works ; Tinned foods.

(3) *Scientific Discoveries*

(*a*) Scientific agriculture.

(*b*) Campaign against the insect pests of man and plants.

(*c*) Tropical medicine ; Blood-sucking insects and inoculation ; Importance to the efficiency of man and animals.

(4) *Mobilization of Capital for Investment in Colonial undertakings*

(*a*) by Companies. Limited liability, 1855–62 Investment in planting enterprises, wool, diamond and gold mines, timber, tin, and other base metals , Banks financed the great crop movements.

(*b*) by Colonial Governments.

(5) *Effects of the Industrial Revolution*

(*a*) The creation of wealth which could be invested in overseas enterprises.

(*b*) New demand for raw material.

(*c*) Greater demand by a growing and prosperous people for food and amenities, e.g. rubber for bicycle tyres.

(6) *Colonial Nationalism*

(*a*) The importance of the 'eighties.

Canadian Pacific Railway opened 1886, Gold mining in the Transvaal 1886, Cold storage 1882, First Colonial Conference 1887. Four chartered companies formed.

(*b*) The importance of Colonial federation in the development of national policy.

Canada 1867–71, Australia 1900, South Africa 1910.

(7) *The new Tropics and Primitive Peoples*

(*a*) Africa ; West, Central, East, and South ; Nigeria (chartered company), Ashanti and Northern Territories, Rhodesia (chartered company), Nyasaland, Uganda, and East Africa (Kenya) (chartered company), the Sudan, and Somaliland.

(*b*) Malaya including British North Borneo (chartered company).

(*c*) Polynesia.

(8) *Constructive Imperialism*

(*a*) Economic Alliance. Loans, postage, cables, preferences, conferences, income-tax reductions, trade commissioners, Imperial shipping board, common action against diseases and pests.

(*b*) Trusteeship. New government policy of tropical development and new attitude towards primitive peoples.

Stages of economic development ; the manor, the town, the nation, the Empire.

PART ONE

ECONOMIC STAGES IN THE DEVELOPMENT OF THE OVERSEAS EMPIRE

THE British Empire at the present day is the most extraordinarily varied unit in history. It comprises a quarter of the globe and over 200 separate items.[1] The ancient or primitive world is represented in its tropical possessions, the mediæval world in India, and the modern world in the self-governing colonies. In climate it ranges from the Arctic in Canada to the Tropics, and touches the fringe of the Antarctic in the Falkland Islands and in New Zealand, and includes 1½ million square miles of the Antarctic mainland itself. It includes parts of three great habitable continents and the whole of a fourth—Australia—which alone in area is larger than the United States. It also includes a circle of islands round the globe and another great string of islands stretching down from the Malay Peninsula through the Pacific, one of which, New Guinea, is so large that it is almost a fifth continent. It has great island outposts off the coast of America in the West Indies, and off the east coast of Africa, in Mauritius and other islands. It is composed of the most amazing variety of peoples—Europeans, Eskimos, Red Indians, Arabs, Negroes, Melanesians, Polynesians, while the largest number of Chinese outside China and Siam are under the British flag. In India alone 222 distinct vernaculars were included in the last Census. The British Empire is the largest Mohammedan power, and contains members of almost every other religion: Hindus, Buddhists, Confucians, Animists, ancestor-worshippers, sun-worshippers, fetish-worshippers, Jews, Mormons, and almost every sect of Christian.[2]

[1] See *Colonial Office List* or Grant Robertson's *Historical Atlas of the British Empire*, pp. 7–10.

[2] The form of religious belief is supremely important to the economic historian since religion or its tradition moulds the man and reacts on his whole economic life.

The peoples of the British Empire are in every economic stage of development, and are centuries apart in their types of civilization or incivilization. Cannibals, head hunters, nomads, pirates, slave traders, merchants and money-lenders, peasants and homesteaders, planters and squatters, great capitalist companies, captains of industry, engineers, financiers, Indian rulers, Nigerian emirs, Malayan rajahs, tribal chiefs, officials, factory hands, miners, and agricultural labourers are all part of its economic equipment.

The agriculture of the Empire presents the most extraordinary contrasts. There is the intensive agriculture of England and "wheat mining" in the Canadian prairies; there are peoples in the pastoral stage owning communal cattle herds roaming over large parts of British Africa, and the highly developed sheep breeding of Australia. The same Empire includes the camel herds of the deserts of Somaliland, rice cultivation in the swamps of Burma, and the cod fisheries in the icy waters round Newfoundland. The tiny half-acre plots of a large proportion of the Bengal cultivators seem to be worlds apart from the great cattle and sheep ranches of Queensland and New South Wales, which reckon their area in square miles. The irrigation that is necessary owing to drought and desert conditions in the Punjab, Australia, and the Sudan, is in sharp contrast with the tropical rainfall of East Bengal, Malaya, and the abundant water power of Canada. The co-operative dairy industry of Ontario and New Zealand, the development of scientific agriculture in South Africa, the salmon canneries and fruit growing in British Columbia, the sugar production of the British West Indies and Guiana—all present fresh aspects of the production of the world's food supply within the Empire.

Within the Empire, too, are obtained under the most varying conditions all the great commercial staples. They range from furs, wheat, and lumber in Canada, diamonds and gold in South Africa, to wool and cheese in Australasia. The Empire is also capable of furnishing every great tropical product—rubber, tea, sugar, cocoa, coffee, palm-oil, jute, sisal hemp, and cotton, though this last fibre is grown at present chiefly outside the Empire in the United States and Egypt.

It contains almost every known metal. In addition to iron, zinc, mercury, and copper, there are the rarer metals such as nickel in Ontario and tin in the Malay States, while gold is found in the Yukon, in Northern Ontario, on the

Rand, in Rhodesia, in West Africa, the Sudan, India, New Zealand, British New Guinea, and Australia. Silver is found in abundance in Cobalt, Ontario, and at Broken Hill in New South Wales.

Nor is the ever-useful coal absent in any of the greater areas. Nova Scotia, Alberta, Vancouver, India, Selangor (Malaya), Labuan, Natal, Cape Colony, the Transvaal, Rhodesia, Nigeria, Newcastle (New South Wales), and New Zealand all have abundant supplies, while England itself is a vast coalfield, of good quality, highly accessible.

The British Empire contains almost every stage of industrial development and almost every agricultural and labour problem. Its currency has during the nineteenth century included rods, cowries, rum, slaves, rupees, dollars, francs, and the pound sterling. The Colonies and Dominions are the field of endless experiments in land tenures, compulsory repurchase of land, agricultural credit, and co-operation, agricultural education, scientific experimentation, and state conservation of natural resources. It is the same in the industrial sphere. New forms of workmen's compensation, industrial arbitration and wage fixing, state businesses of all kinds from state railways to state fish shops, organized state wheat pools, state shipping fleets, and state insurance companies are all to be found in the overseas Empire. Within the Britannic system there is Great Britain, with its highly specialized engineering and textile production, unrivalled for quality, exporting under free trade conditions to all the world, and the infant protected industries of Australia and Canada. Under the King of England are to be found the organized trade unionism of Great Britain, government by the labour party in Australia, and domestic slavery in Calabar. The problems range from those of the freed slave, the contract labourer, forced labour, convict labour, and imported indentured labour to the training of the indigenous native in habits of civilization and the attracting, transporting, settling, and assimilation of the white emigrant.

And an elaborate network of cables, wireless stations, and steamer communications connect together all these varied regions and peoples of primitive, mediæval, and modern civilization with the little misty, northern island on the outskirts of the Atlantic—the great trading centre of the world.

Every product, every clime, every religion, every stage,

every possibility, and consequently every experiment and every problem, are encountered in the study of the economic development of the British Empire. To know something about the Overseas Empire at the present day is to get some idea of the whole evolution of civilization.

Although she is situated on the outskirts of Europe Great Britain is not really a European power. Ever since the seventeenth century she has gradually been developing more and more as a great Asiatic, African, and American power which only impinged upon Europe when those extra-European interests were touched or threatened by European powers.[1]

This overseas expansion has gone through three stages. From 1598 to 1763 the British Empire may be styled an *Empire of Outposts*, consisting as it did of islands, trading stations in India and West Africa and a stretch of inhabited coast-line in North America.

In no case was there any appreciable interior expansion, simply because goods could not be handled at any price at which it would pay to transfer them over considerable land distances. Accessibility was the prime necessity, and even the interiors of such islands as Jamaica and Newfoundland were unexplored till the nineteenth century. Europeans merely dotted a coast-line or settled along a navigable river like the St. Lawrence or the Hudson. Even rivers did not facilitate inland expansion to any great extent as settlers could not afford to live at any considerable distance from the river banks. It is easy to come down a river but difficult to go back, and so many rivers are obstructed by rapids, sand-banks, low water, flood water, timber, or ice that but few rivers have been feasible as important highways of inland penetration. Settlement along the coastal fringe of islands, continents, or along river banks was obstructed by the fact that so much of

[1] England intervened in the wars of the Spanish Succession to prevent France joining the vast American colonies of Spain to her other great colonial possessions in the Antilles, India, and Canada. England joined in the Seven Years' War largely to prevent France hemming in the American colonies by her expansion in the region between the Mississippi and the Alleghany mountains, thus joining up French Canada and French Louisiana. England did not land troops in Europe during the French Wars after 1793 until Napoleon invaded Spain and Portugal in 1808. With the French in possession of the Iberian Peninsula there was then a danger of the Spanish colonies in South and Central America, and the African colonies of Portugal falling into French hands. Then, and not till then, after fifteen years of war, did Great Britain fight on land in Europe.

the low-lying coastal or riverine area was the home of yellow fever or malaria.

This early and relatively insignificant expansion was of two types—commercial expansion in tropical and semi-tropical areas and a racial expansion in the temperate regions. Overseas possessions were regarded at this time by all the colonizing powers as estates to be worked for the benefit of the mother country and " the old colonial system " was designed so to shape the development of colonies that they should become providers of raw materials or tropical products such as sugar and spices, and should furnish good markets for the manufactures of the mother country. This policy was not peculiar to England. It was carried out by Portugal, Spain, Holland, and France, the only difference being that the English system was of a milder and less restrictive nature. The countries of Europe were thinly populated owing to the ravages of famine, pestilence, and wars; there was a shortage of labour in practically every country. To let one's people go would have seemed folly to the seventeenth century mind unless those people were to contribute in an even greater degree to the power and prosperity of the mother country somewhere else. To permit emigration was to increase the burden of defence as the emigrants had to be protected, and it seemed only reasonable that they should sell to, and buy from, the nation on whom their whole security depended, and which bore the cost of their protection. Measures were therefore taken to this end, and no European country allowed foreigners free access to its colonies.

The policy of the period was that of " mercantilism ", which when applied to colonies meant that they were regarded as subordinate to the commercial development of the mother country. Nevertheless, restrictions were offset by bounties and considerable preferences in the English tariffs of the period.

The second period dates from the acquisition of Quebec in 1763, and the grant to the East India Company in 1765 of the diwani, i.e. the right to collect the revenues of Bengal. It ends about a century later with the creation of the Dominion of Canada between 1867 and 1871, and the opening of the Suez Canal in 1869. It may be termed the *period of continental inland expansion.* The retention of Quebec begins a new era in British colonial history.

Previous to that date the cherished parts of the old colonial system had been the East and West Indies, because their trade was more important than that of the American continental colonies. It was seriously debated whether England should keep Guadeloupe or Canada at the peace in 1763. When it was decided to keep Canada it was a sign that the Empire of racial settlement had begun to be more important than the plantation colonies and the trading posts. But almost at the same time the trading posts in India began to merge into a continental Empire. When the diwani was given to Clive in 1765 the Company began to depend principally upon its land revenue, and not on its trade for its profits. The power that collected the revenue virtually owned the province, and the Company no longer existed on sufferance to carry on trade from fortified posts as heretofore. From that time it became a territorial power which rapidly extended its rule not merely up the Ganges plain towards the Western hills, but also penetrated inland from Bombay and Madras.

In this period not merely was the Empire enlarged by the retention of Canada, but settlement in Australia was begun in 1788, and Cape Colony was retained at the Peace of 1815. Thus, the end of the eighteenth century witnessed the spread of the British race in two new continents —Africa and Australia. The Indian possessions were extended so rapidly that a new Empire was formed and a new title was added to the British Crown when Queen Victoria became Empress of India in 1877. In each case it was inland expansion away from the coast, and the St. Lawrence and the Ganges were at first the great highways of penetration. In 1783, twenty years after Canada became British, the thirteen North American colonies became independent— a loss of nearly four million souls to the Empire. As Great Britain herself did not number more than about eight and a half million at the time, this was a considerable racial loss even when it be borne in mind that a certain proportion of that four million were negro slaves and ex-convicts.[1]

The attainment of independence by the United States had important reactions on both British colonial expansion and policy. A new place had to be found for the convicts

[1] In 1790 there were 3,172,444 whites in U.S.A. and 697,624 slaves, i.e. 22 to 100 whites. The value of the slaves was $104,643,600. "Century of Population Growth": *U.S.A. Senate Document*, p. 139.

who had hitherto been sent to the American mainland. The result was that five years after the loss of the thirteen states a new colony was inaugurated when Botany Bay became a penal colony and the English turned definitely and for the first time southwards. The inland penetration in Canada was also partly a result of the success of the American rebellion. A large number of loyalists either could not or would not stay under the Republic and they were settled by the British Government in New Brunswick and Ontario. When after the war of 1811 the Government began to make the canals which avoided the rapids on the St. Lawrence this work was partly undertaken as a measure of defence against the United States, but it also promoted inland settlement along the canals, especially those connecting the Ottawa river with Lake Ontario.

The inland penetration began in New South Wales, when the gap through the mountains on to the plains was discovered in 1813, which enabled the development of millions of sheep in the interior. The retention of Cape Colony in this period was due to the growing importance of India. Cape Colony was a refitting station on the way to India, and was regarded as an outpost of India, not as a region that was important in itself. The inland penetration began when the Boers with their flocks and herds wandered up country away from British rule. There they encountered another race of colonizers, pushing down from the north-east, the Bantus, also a cattle-owning nomadic people : the two clashed in a struggle for pasture areas and the British Government felt impelled to penetrate inland to protect the Boers from the Kaffirs and to make room for a white civilization.

The transport of oxen and sheep into the interior presented no difficulties, as they could use their own legs and could be driven long distances for shearing or slaughter. Commodities, on the other hand, cannot convey themselves to market and only valuable and non-perishable articles can stand expensive transport and the inevitable delays of pack animals or ox-wagons. Even if sheep were sheared in the interior, wool was a valuable product which would keep for years. Thus, the "back blocks" in Australia acquired a new value, and the Eastern portion of the South island of New Zealand became a great sheep run. The inland penetration of the Boers had also depended on the self-conveying capacity of their animals.

The inland penetration in India, apart from the Ganges, began with the building of roads and railways which facilitated not merely the movement of troops to keep order but the transfer of produce. The system of trunk roads was begun in the 'thirties, the railways in the 'fifties. The Canadian expansion in this period was greatly facilitated by railways, first begun in 1852. They were of supreme importance in a country where the waterways were closed by ice for five months of the year, and they enabled men to settle away from the water front.

The railways did not facilitate inland expansion to anything like the same extent in Australia and New Zealand, and scarcely affected South Africa at all before 1870, because the economy of these countries rested on valuable animal products, i.e. the penetration hinged on the walking capacity of animals. The exports of India consisted, on the contrary, of jute, indigo, hides, tea, rice, and raw cotton, those of Canada were lumber and grain. These products have not merely to be carried but must be carried cheaply if the commodities were to sell in the world's markets, and the penetration was dependent on good transport facilities. Most of these commodities would simply not have been purchased at a high price as there was plenty of competition elsewhere. Norway, Sweden, Russia, and Prussia all supplied timber, Prussia and Russia grain, and the United States cotton and wheat. The railways came early where commodities had to be carried, and late where there was a pastoral economy.

As soon as South Africa began to base its economic life on diamonds and gold, which meant a demand for heavy machinery, and food supplies for mining camps, as soon as Australia began to grow wheat and New Zealand specialized in dairy produce, then railways and inland expansion were almost interchangeable terms. But these developments did not occur till the 'eighties.

In the early part of our period two great rivers in the case of Canada and India, and the movement of animals in the case of Australia and South Africa, were responsible for the beginnings of the continental inland expansion which is a leading economic feature of the years between 1763 and 1870.

This colonization of continents really rested on the market obtainable for the goods which could be produced in far interiors and the ever-increasing demand of British

manufacturers for wool, which was the outcome of the rapid spread of machinery in the woollen industry after 1840, provided a market for the staple product of Australia and South Africa.

The investment of capital in India during this period was partly due to the great demand for jute for bags to carry grain after England repealed the Corn Laws in 1846, and partly to the demand for raw cotton in England for the machines and to the desire for indigo as a dye for the textiles. The growing prosperity of the working classes in England led to the demand for " a good strong cup of tea ", and as Indian tea was much stronger than China tea it came rapidly into favour in the 'sixties, leading to the inland expansion into Assam. The result in each case was that coast-lines grew into inhabited continents. By 1870 the British stock was settled on both the Pacific and Atlantic coasts of Canada. The port of call at Cape Town had expanded into Cape Colony, Natal, the Transvaal, and the Orange Free State. Five separate colonies had been created in Australia ; Tasmania and the two islands of New Zealand were in process of being settled North and South, East and West. The " forward policy " in India had brought two-thirds of that sub-continent under British rule, to which Lower Burma had been added between 1826 and 1852. The new continents peopled by the English race had either attained to the dignity of self-governing dominions or were by 1870 in process of reaching that status.[1]

This grant of self-government betokened a new colonial policy on the part of England. Before the grant of self-government even the racial colonies were in much the position of non-racial colonies to-day, i.e. Great Britain was the determining factor as to the commercial policy they should pursue and the relations which should subsist between the colonies, the mother country, and foreign powers. A self-governing Dominion would almost inevitably claim the right to decide its own commercial policy and could not be refused. No longer could the economic development of such a region be subordinated to that of the homeland. England went gradually over to free trade between

[1] Self-government began in Canada in 1847, New South Wales in 1855, and in New Zealand 1858. Cape Colony did not become self-governing till 1872 or Natal till 1893, Western Australia 1890 and the Transvaal 1906–7.

1822 and 1860, and she had no desire to impose restrictions on anyone, colonials or foreigners. She was, on the contrary, anxious "to cut the painter" and let the colonies go their own way. She was constantly being involved in expense on their account. Kaffir wars in South Africa, convicts in Australia, deficits in the Civil List in Canada with the possibility of having to defend that country from the United States—all these commitments made Great Britain only too anxious to let the colonies become independent and shoulder their own burdens, especially as Great Britain could not tax the colonies after the revolt of the thirteen American States. Until they became self-governing she had only the privilege of making good deficits. The colonial policy like the commercial policy of the period was one of *laissez faire* as far as possible. But nevertheless the Empire of Outposts had become an Empire of Penetration—an Empire of settled interiors.

The third period from 1870 to the present day was a period when the Empire, and not merely Great Britain, became a world power. It attained an increasing coherence, and became not a mere congeries of races under the British flag but *a world unit*. The typical developments were the growth of colonial nationalism, tropical expansion among primitive peoples, and a new policy of constructive imperialism.

The reason for taking the year 1870 as the beginning of a new epoch is due to the coincidence of a number of economic and political events about this date. In 1867 five Canadian provinces federated and became a dominion, the adhesion of British Columbia in 1871 extended the boundaries of that federation from the Atlantic to the Pacific. Federation, whether in Canada, Australia, or South Africa, marked in each case the end of the colonial status of the self-governing colony and the beginning of dominion status. The economic policy of separate provinces was of small importance in the world. A federation was big enough to have a national commercial policy of its own, and was able to make its own terms in treaties. The opening of the Suez Canal in 1869 altered the trade routes of the world, and the economic importance of the countries situated on, or bordering, the Pacific. It led to the acquisition of new colonies to guard the route and Egypt, the Sudan and Somaliland acquired a new value for the Empire.

The canal also shortened the distance which separated the mother country from its great Empire in India and its Australasian racial settlements.[1] In 1763 and 1765 two events, one in Canada and one in India, had co-operated to produce a new era, so two new events affecting the same two areas inaugurated a new epoch between 1867 and 1871.

In 1870 Germany defeated France. Flushed with victory, Germany turned her efforts to the economic sphere, and rapidly became a great industrial nation, putting the same energy and organization into her commercial effort that she had put into her military effort. Germany then began to look abroad for raw materials and markets. In her new national pride she wanted colonies partly for economic reasons, partly as areas to which her people might emigrate instead of going to the United States. She began to scramble for Africa and the Pacific Islands. France could not see herself out-distanced. Sore at the loss of Alsace and Lorraine, she began to seek for compensation for the national humiliation by inaugurating a great tropical expansion in Indo-China, North and West Africa, and in Madagascar.

The Russians, baulked from obtaining Constantinople in 1878, began to spread out more energetically into both Siberia and Central Asia, and this to the English seemed to threaten India. On all sides England had to make up her mind whether she would pursue a more forward policy with regard to tropical expansion or whether she would stand by and witness her possible exclusion. While the Great Powers were inclined for political reasons towards an active policy of expansion their colonial policy was stimulated by the cumulative effect of certain economic factors which made the surge towards imperialism almost inevitable, and which reacted with especial force on the greatest of all the industrial powers at that date—Great

[1]

			Nautical miles
	By Cape	*By Canal*	*saving %*
London to Bombay	10,667	6,274	41·2
„ Madras	11,280	7,313	35·2
„ Calcutta	11,900	8,083	32·1
„ Singapore	11,740	8,326	28·8
„ Hong Kong	13,180	9,799	25·6
„ Adelaide	11,780	11,100	5·8
„ Melbourne	12,140	11,585	4·6
„ Sydney	12,690	12,145	4·3
„ Wellington	13,610	13,055	4·1

J. R. Stat. Soc., 1887, p. 526.

Britain. So rapid was the expansion of British rule and British settlement after 1870 that the British Empire came to include a quarter of the earth. It is this period that is the really important creative period of the new British Empire. Man, helped by science and engineering, became for the first time dominant over nature and could subdue natural obstacles and create new conditions favourable to himself, and this reacted with especial force on undeveloped countries.

Of the economic factors which transformed the Empire and its outlook in this period, mechanical communications were probably the most important. Railways, steamships, and telegraphs gave a new mobility to both men and goods. To these cold storage came as a powerful adjunct. Another group of forces were brought to play on colonial development in the medical, botanical, chemical, and entomological discoveries which altered the relations of man to his environment and made new products available. The invention of the limited liability company and the consequent development of banking provided the capital which enabled the great series of railways and other public works to be undertaken. Finally, the reaction of the industrial revolution created new demands and made an active policy of development " worth while ".

After 1870 railways began to be built more rapidly owing to the invention of cheap steel by Bessemer. This produced the steel rail with a life so much longer than that of the iron rail that it revolutionized the cost of land transport. Larger trucks and heavier locomotives became possible with the greater strength and flexibility of the steel rail. Mechanical transport after 1870 became for the first time cheap transport, and the railways enabled bulky commodities to be moved long distances to the great markets of the world at prices that tempted consumers. The fact that goods could now be profitably raised in far interiors accelerated the continental inland expansion. Insects such as the tsetse fly which kill draught animals cannot injure a locomotive, and thus large parts of tropical Africa acquired a new value with a new possibility of safe penetration. Railways can overcome the physical obstacles of rapids by going round them, can traverse sand deserts, can surmount heights and are not affected by frost or snow, tropical heat or malaria.

In the same way the steamships after 1870 began to

provide cheaper sea transport owing to two new inventions—the compound engine, which economized the use of coal and thus made for cheaper working, while affording greater space for cargo, and the improvements in the surface condenser in 1870 which no longer made it necessary for ships to carry large quantities of fresh water. Sea water could not be used as it injured the boilers and fresh water could not be used more than once as it evaporated. After the perfecting of the surface condenser it became possible to use the same water in the boilers for two months without changing. This improved condenser also economized space, prolonged the life of the boilers, and caused a diminished consumption of coal.[1] These two inventions altered the whole type of steam-shipping between 1870 and 1880, and the drop in freights was phenomenal. The Suez Canal accelerated the disappearance of the sailing ships as they cannot go through "the ditch". The speed of the steamers and the shortening of the route to the East by the canal enabled the new vessels to be utilized to far greater advantage and to make two or three voyages where a sailing ship would only have made one. The development of mechanical appliances for loading and unloading at the docks avoided delays and again enabled a ship to make more voyages. This economy of time reduced freights still further. Steel as a material for ships began to be increasingly used in the 'eighties. It lasted longer, and being lighter than iron the displacement was not so great and more cargo could be carried before the load line was reached. Ships grew larger and larger in size, and proved more economical in the labour required per ton. The reduction in sea transport charges owing to these inventions were specially helpful to remote places such as Australia and New Zealand. The carriage of goods by sea and land was in fact revolutionized between 1870 and 1890, and this reacted on all colonial development.

The liners also improved in type, laid themselves out for the emigrant traffic, and in some cases acted as recruiters of emigrants. Thus, a new population, English, German, Scandinavian, Italian, and Eastern European was trans-

[1] So serious was the corrosion of the boiler plates that in 1866 six of the best vessels of the P. & O. Company were laid up in India and were unable to proceed. From MS. on *The Economic Development of the Mechanical Engineering Industry*, 1750–1900, by A. T. Kings, awarded M.Sc. degree.

ferred to the New World. They also enabled the small trader to take part in the development of the Tropics. Previously the great merchant houses chartered a whole ship. With the liners the small man could carry on a trade in parcels. There was in consequence a new competition in colonial trade.

With the telegraph and the cable all communications became easier, transactions were shortened and became more certain. Consignments became less of a speculation, goods were sent to order, intermediaries were eliminated, and much more direct contact between buyer and seller was established. All this made for a drop in price and the increase of business.

The installation of cold storage for the conveyance of meat in steamers without deterioration was successfully accomplished by the New Zealand Shipping Company in 1882. It created a new era in New Zealand and Australia, for it made the carcass of the sheep valuable as well as the hide; the price of sheep rose and they began to be bred for mutton as well as for wool. "Canterbury" lamb supplemented the English meat supply and that of the Pacific. With the possibility of a meat export, cold storage enabled Queensland to start her cattle ranches, and a new prospect was opened out for the South African cattle herds which was not, however, taken advantage of till the great demand for meat during the war. Cold storage also enabled the transference of fresh fruit and frozen salmon—recent South African and British Columbian development. As the carcasses are frozen before being put into the refrigerating chambers the cold storage works on land proved to be the beginnings of industrial enterprises in many places. Exceedingly important both in their social and economic effects were the new possibilities of transferring dairy produce such as butter and cheese from New Zealand, Australia, and Canada. "Closer settlement" became possible when small farms could be made an economic success with milk, butter, and cheese that could now find a market in the Pacific or in England.

Moreover, cold storage enabled a variety of foodstuffs to be kept fresh in the Tropics and thus added enormously to the health of persons who had to live in these regions. To this the development of tinned foods also contributed. When tinned oysters can be eaten in Central Africa, more variety in food is possible than is provided by the active

unnourishing fowl and skinny goat of some parts. The canning of fruit, vegetables, and meat is inevitably bound up with cold storage as it is necessary to keep the raw material in good condition before it can be dealt with. Fruit comes in a glut and cannot always be preserved the same day, and this is equally true of other perishable products.

The discoveries in Natural Science comprised the second great factor which came in to help the development of the overseas dominions and possessions. Scientific agriculture began to provide better types of plants, whether it were sugar cane in the West Indies or wheat in Canada or India. Entomologists began to fight the insect pests which afflicted both plants and animals. Mycologists began to wrestle successfully with the fungoid diseases. Tropical medicine had its great triumph in the discovery of the mosquito as the cause of malaria, in 1897, with all the new lines of investigation opened out by the realization that blood-sucking insects could transmit disease to both men and animals. While it became possible to take precautions against the mosquito or the tick, inoculation both of men and animals also produced wonderful results. The death-rate of the labourers on the Rand from pneumonia sank rapidly after the vaccine was introduced. Horse sickness, rinderpest, and similar diseases were no longer the devastating ruinous plagues that they had been, owing again to inoculation. In the age-long duels between man and the germ and man and the insect, man was beginning to win.

The Tropics, with a better food supply and new health knowledge, opened out new possibilities to the white man, while the death-rate, health, and efficiency of the natives were capable of enormous improvement once the causes of tropical diseases began to be understood.

Railways, cold storage works, and similar large scale enterprises cannot be built without capital. The mobilization of capital in the form of limited liability companies, first permitted in 1855, was one of the most important factors in the development of the Empire, because this form of associated trading minimized risks. It meant that people who subscribed to such a joint stock company were only liable to the extent to which they had taken shares in that company. Previously each individual had been, under the system of unlimited liability, responsible

for the whole of the debts of the company. This encouraged investment in such safe securities as Consols, and made it difficult to obtain capital where the undertaking was of a speculative nature. The risks of sinking money in companies, operating in regions so distant as were the colonies and dependencies in the first half of the nineteenth century, would deter ordinary investors if they were liable to the whole extent of their fortune.

In 1862 the company laws were still further modified, and banks hitherto excluded were admitted to the limited liability circle. The result was a gradual mobilization of capital of the moderately well off as well as rich persons. There was only a small risk involved, and joint stock companies with limited liability did much to develop British imperial resources, especially in and after the 'eighties. The building of railways, steamships, cold storage establishments, the pioneer work of plantation companies, mining and exploration companies all needed large financial backing, and such sums were impossible for a few individuals to provide, but they were easily obtained in the form of company capital. Everyone who had a land or mining concession from a native potentate, everyone who wished to start growing tea, quinine, sugar, or rubber on a large scale came to England to try to float a company. Companies helped to develop the wool of Australia, the diamond and gold mines of South Africa, the settlement of Rhodesia, the lumber of Canada, the tin mining of Nigeria, the plantations of Assam, Southern India, Ceylon, and Malaya.

Without the credits provided by the new banks formed under the new limited liability principle, the great crop movements of the colonies could not have been financed, and many of the great railway lines could not have been built. It never entered into the ideas of British pre-war economics that the British Government itself might find the money for colonial economic development. Though the Indian Government found money for railways and the Uganda railway was built out of the funds provided by the British Government, this was regarded as due to quite exceptional circumstances.

The self-governing colonies, on the other hand, had no hesitation in raising large loans on the credit of their governments. They were able to borrow so much more cheaply than private individuals that they undertook, especially

in Australia, New Zealand, and Cape Colony, large schemes of public works. Great banking houses formed on the joint stock principle organized the successful floating of the loans in England, and the practice of underwriting made it certain that the money would be forthcoming, because that portion of the loan which could not be absorbed by the public at the moment was taken over by the underwriters who placed it later.

The invention of these new financial devices was the means of providing the capital through ordinary investors without which modern large-scale works could not have been undertaken either in the colonies or at home.

The money would not have been forthcoming, however, were it not for the wealth and the demand created by the industrial revolution. Through her great mechanical inventions England had become rich and had capital to invest.

As the 'eighties was a period of great depression in England money was not invested to the same extent in "Industrials" as it had been before 1870. Consols, on the other hand, did not yield more than $2\frac{3}{4}$ per cent. Colonial government stock came accordingly more and more into favour with her higher yields. The increased interest of the investing public can be seen by the creation of four new chartered companies for colonization in the decade 1880–90. They were the British North Borneo Company 1884, the Royal Niger 1886, the Imperial British East Africa Company 1888, and the British South Africa Company 1889, each of which added large territories to the British Empire.

At the same time the development of the factory system not merely in England, but in Germany, France, and the United States enlarged the uses for minerals, timber, and fibres. The rise in the standard of comfort of the mass of the people created a demand for more and new foodstuffs. More meat, more butter, more sugar, more chocolates were eaten and more tobacco smoked. Butter was used in increasing quantities and was helped out by margarine. More milk was consumed and it paid to feed cows better, hence an increased demand for edible oils as oilcake was made out of the residue. Vegetable oils were required for industrial purposes, such as tinplates, paint, and lubricants. The spread of the democratic bicycle, owing to the greater prosperity of the people,

created a new use for rubber as tyres, to be followed by the larger demands of the more aristocratic motor car.

Thus, the demand for foodstuffs, minerals, and raw materials coincided with mechanical transport and scientific discoveries, while the new finance made easy the connexion between the grower and the consumer. It was the two decades between 1870 and 1890 that saw these mechanisms perfected, and the 'nineties reaped the benefit. In 1886 the Canadian Pacific Railway was opened, in the same year the gold mines were begun on a large scale in the Transvaal, and cold storage after 1882 opened, as we have seen, a new era in Australasia. Each of the self-governing colonies then became much more prosperous and enjoyed a rapid expansion in marked contrast with the slow progress of the earlier period. The railways especially attracted capital and artisans, created towns and accelerated all trade, whether internal, export or import. If these regions could sell they could buy, and they became increasingly valuable as markets. Hence, there was a new rivalry among the European powers to win colonies, an impulse shared even by the United States, which acquired possessions in the East and West Indies. It is no accident that the first colonial conference was held in 1887, after a period of world depression which witnessed a new world competition.[1] The growing prosperity of the self-governing colonies with the great wheat export from Canada, the export of meat and dairy produce, added to the wool of Australasia and the production of gold and diamonds in South Africa, made them in this period better customers for British goods.

The era of colonial nationalism was inaugurated by the creation of the Dominion of Canada (1867–71). The merging of six separate colonies, Nova Scotia, New Brunswick, Prince Edward Island, Quebec, Ontario, and British Columbia, into one whole with the abolition of internal tariffs and the starting of a new national policy for the whole in 1878 meant the end of the period of colonial dependence. It was a stage which was followed in the succeeding period by Australia in 1900 with the merging of six colonies into one and by South Africa in 1910 with the merging of four. Although self-government had been granted earlier it was federation that marked the stage

[1] Knowles, *Industrial and Commercial Revolutions*, 3rd edition, p. 145 ff.

of nationhood, the sloughing off of the colonial attitude, and the beginning of a new economic policy of national development for each region carried out by its own government.

While colonial nationalism, one of the new features of this period, was stimulated by the economic factors just enumerated, another new feature, tropical expansion among primitive peoples, so marked after the 'eighties, also reacted to the new forces.

Colonization to the Englishman of the nineteenth century always meant racial expansion, and " colonies " meant the self-governing areas. Although England ruled India directly after the Mutiny, the idea of tropical colonization scarcely existed in men's minds. Only at the end of the nineteenth century was this beginning to change.

The opening of the Suez Canal, shortening as it did the route to the East, not merely quickened the whole of European trade with India but gave a new stimulus to the trade of East Africa and the Far East, a new value to the whole of the Pacific, and opened a new interest in, and created a new attitude towards, tropical expansion.

Perhaps the most striking development of the period was the penetration and opening up of Africa, and the scramble for Africa in the 'eighties brought home to the British peoples the importance of tropical areas. It was obvious if Great Britain did not want the Tropics somebody else did. The expansion in India had eventually brought three hundred millions of coloured peoples under British rule and influence, the new expansion in Africa added still more millions of coloured peoples.

The new accessibility by steamship, the cheap freights, and the new demand led to increased interest in the Pacific and its islands, and the tropical inland expansion in Africa saw a parallel expansion both among the tropical islands of Oceana and in the Malay peninsula.

The economic progress of the self-governing dominions involved a new policy on the part of England with regard to the now self-conscious nations. This, together with the responsibility for millions of coloured peoples, and the new value given to the regions they inhabited, all combined to produce the third feature of the period, viz. a policy of constructive imperialism.

England had previously been responsible for a great mass of Indian native peoples who had an ancient civilization

behind them. After 1870 the millions of savage and primitive peoples who came under her ægis were of a very different character, and they necessitated a new type of paternalism and the evolution of new principles of dealing with native races. Thus, a policy of economic alliance on the one hand, and a policy of trusteeship and tropical development on the other, were both foreshadowed and both were new.

As far as the self-governing dominions were concerned new economic ties were consciously created after 1887 by colonial and imperial conferences, the development of cables, the cheapening of postage, preferences in the matter of loans on the part of Great Britain and preferences in the tariff on the part of the self-governing dominions.[1] After 1918 England, too, gave a preference in her tariff to such goods of imperial origin as were subject to duty here. Whether the tariff reductions were, or were not, of substantial value is controversial, but the important point is that they testified to a general willingness to create closer ties and make sacrifices to obtain imperial unity along economic lines. But they were only a part of a considerable scheme for attaining this end. Income-tax reductions on money invested within the Empire, imperial trade commissioners, and a common approximation of various branches of commercial and industrial law all moved in the same direction. Common action in matters of shipping and the fighting of diseases and pests was also evolved.

England had sought to relieve the depression during and after the Napoleonic wars by throwing open the trade to India and a conscious effort was made to develop English exports to India. In like manner in 1918 an effort was made to relieve the after-war unemployment in Great Britain by developments in Africa and other tropical regions. A new impetus was thus given by both wars to the economic development of the Empire.

As far as the tropical possessions were concerned Great Britain had the power to decide their economic fate. The constructive policy adopted was not merely due to the fact that economic values had altered but to the fact that knowledge had advanced so much that it was really possible for a government to do something effectively. Engineering had reached such a point that, given money enough, almost any physical obstacles could be overcome.

[1] Knowles, *Industrial and Commercial Revolutions*, pp. 330-41.

With the knowledge of preventive medicine some supreme authority was needed to insist on proper sanitary measures. With the possibility of combating insect pests or cattle diseases again some controlling power became necessary to insist on the proper precautions being observed, or to provide the serum or the chemical dips for cattle. The provision of new seed and even of marketing facilities formed part of the duties of governments. The English had been learning in India after the Mutiny how to carry out a great policy of Public Works, and were able to apply some of this knowledge to new regions. On the whole, however, the new tropical policy was improvised by men who had little Indian experience. India was relatively civilized. In these new acquisitions England had to begin from the beginning.

The administrative reform of 1870 arranged that the appointment to the Civil Service should be by examination, and this evolved a new type of higher official with a University training. The great developments in education and in science after 1870 also produced men keen, honest, and efficient who could be trusted to carry out a constructive and specialist policy. Both the men and the knowledge were there. When it was obvious that railways, irrigation, and science could relieve famine and plagues in India *laissez faire* was no longer possible. Nor could slavery be tolerated once it was possible to get inside Africa and stop it by developing railways to take the place of slave carriers and alternative commodities to take the place of that great article of commerce—human beings. Backward peoples looked to their government as to Providence. The British Government was bound to " do " something—to act constructively in fact, when once it knew what to do and possessed the mechanism and money with which to carry out its reconstruction. The result was that a new conception of the duties of governments emerged, and the colonial authorities became responsible for the economic, as well as the political, welfare of the lands they governed. At the same time it was found that the development of tropical regions was good business. Hong-Kong, from being a mere pirate's rock in 1841, became one of the greatest shipping ports of the world. The trade of the Malay peninsula increased at an almost phenomenal pace.[1] India was, after 1880, Britain's biggest customer for manufactured

[1] See Section on Malaya, Book II, Part III.

goods, the increase of trade in West Africa was astounding in its rapid development. Producing no cocoa for export in 1890 the Gold Coast rapidly became the premier cocoa-producing region of the world, and the exports and imports of Nigeria more than trebled between 1900 and 1913, and more than quadrupled by 1918, and nearly sextupled by 1923.[1]

The characteristic of all the early settlements was the distance, in point of time, that separated them from the mother country. It needed at the end of the eighteenth century a four to six months' sailing voyage to bring England into touch with her convict settlements in New South Wales or Tasmania, two to three months was the time of a normal sailing voyage to Montreal. In the spring the sailing ships set out for the West Indies and did not expect to make more than one voyage a year there and back and the same was true of the sea voyage to India. The radical change of the last half century has been the annihilation of distance by cables and later wireless making for communications from all parts of the Empire within a few hours. So far as persons and goods are concerned fortnightly steamers and voyages ranging from a week to six weeks in fast steamers will now bring the British "home" from any part of the King's dominions.[2] Imperial conferences became possible as never before. Colonial exhibitions were arranged, a rapid investment of British capital in the colonies took place, emigration was stimulated when it was no longer exile from civilization. The world shrank; an imperial policy became workable. *Laissez faire* was abandoned both with regard to the tropical and the self-governing dominions. The world economics of free trade began to give way to imperial economics.

Thus, the seventeenth and eighteenth centuries were a period of restrictions combined with preferences, defence, and security. It was succeeded in the nineteenth century by a period of free trade and cosmopolitanism with no restrictions and no preferences. Individuals both in the colonies and England were left to their own devices, and made good or failed largely on their own initiative. The British Government between 1763 and 1870 attempted

[1] The figures were 3·9 millions sterling in 1900 and 14·9 millions in 1913, reaching 17 millions in 1918 and 23·1 millions in 1923.

[2] In the Times Atlas of 1875 Lagos which is shown as 33 days from Liverpool is now less than half that time. *Cmd.* 468 (1920), p. 29.

the absolute minimum in its dealings with its overseas possessions, which chiefly meant stopping patent abuses like the slave trade or the bad conditions on emigrant ships and providing defence for white colonists against Kaffirs or Maoris. There were no European wars in the nineteenth century which endangered the safety of the colonies, so the question of defence against foreign powers did not arise. Even the restoration and maintenance of order in India was entrusted to a private company till the Mutiny of 1857. After that date a more energetic policy with regard to roads and railways was pursued, although the railways were left as far as possible to private enterprise till 1869, when a new policy was inaugurated.

After 1870 this policy of *laissez faire* was gradually superseded by an era of active intervention on the part of the Government. After the first Colonial Conference was held in 1887, a definite policy of creating a closer economic tie between all the regions owing allegiance to the Crown was steadily evolved in response to the growing public opinion in England in favour of the imperial connexion.

Like other Western lands, Great Britain has passed through a stage of isolated agricultural self-sufficing communities—the stage of the manor. Then the growth of towns made for exchange between town and the surrounding district and the town stage was reached. In the sixteenth century there succeeded a national stage when town and country were welded into one whole. By the seventeenth century Northampton made boots and Sheffield cutlery for all England, and there was national specialization—the producer and the consumer were no longer in touch and the middleman arose. After 1870, with the new commercial revolution created by the railways came the imperial stage in which there is a growing inter-Empire specialization, Canada producing wheat, Australia wool, India tea and jute, and England making the bulk of the engineering goods for the Empire. The creation of this larger economic unit is one of the most interesting phases of the economic development of the last thirty years.

The new situation found its exponent in Mr. Joseph Chamberlain, who became Colonial Secretary in 1895. He summed up the situation by saying: "No longer have we to read the annals of a kingdom—it is the history of an Empire with which we have to deal." [1]

[1] Speech, 1st August, 1902, in *Speeches*, ed. Boyd, ii, p. 70.

BOOK ONE

SYNOPSIS OF PART TWO

Economic Divisions of the Empire and Their Population

I. *The Two Empires and the Underlying Unity of the Whole*

Common interests in the Tropics, inter-imperial trade, loans, defence, communications, applied science, common ideal.

II. *Regions of Western Expansion and Economic Self-Determination.*

(*a*) All British population: Australia, New Zealand, Newfoundland.

(*b*) British and foreign European stock: Canada, South Africa.

(*c*) British and coloured stock: Areas of clash; South Africa, Rhodesia, Kenya.

III. *Regions of Directed Development*

(*a*) The agricultural Empires: India, Egypt.

(*b*) The plantation colonies:

(i) Agricultural plantations with imported labour: West Indies, Ceylon, Malaya, North Borneo, Mauritius, Fiji, Natal.

(ii) Agricultural plantations with indigenous labour: Kenya, Nyasaland, ex-German colonies.

(iii) Trading plantations: Hong-Kong, Singapore.

(*c*) Native colonies:

(i) Nomads: Sudan, Somaliland, parts of Kenya, Uganda, and Northern Nigeria.

(ii) Communal cattle herding: extensive cultivation; Bechuanaland, Swaziland, Basutoland, Native reserves of South Africa, Rhodesia, Kenya.

(iii) Collectors of forest produce: Southern Nigeria, Sierra Leone, Gold Coast.

(iv) Exchange cultures on small holdings: Uganda (cotton); Gold Coast (cocoa); Gambia (ground nuts); Northern Nigeria (ground nuts and cotton).

PART TWO

ECONOMIC DIVISIONS OF THE EMPIRE AND THEIR POPULATION

FROM the seventeenth to the twentieth century the British Empire has consisted of two separate types, so radically different that it might be said that there are two British Empires and not one. The basis of one has been European racial expansion and of the other trade and rule.

From an administrative point of view the regions under the British Crown have been divided into three groups: the Dominions, a group consisting of Colonies, Protectorates, Spheres of influence and Mandated territories, and the Empire of India.[1] Politically, the fundamental distinction lies in the fact that the first group governs itself and has reached the stage of nationhood, and the others are governed from the Colonial Office, the India Office, and Westminster. Economically speaking, however, the dividing line between the two Empires is that certain regions are an expansion of Western civilization, and are free to direct their own economic life. They are for the most part situated in the temperate regions. The other Empire, lying mainly in the Tropics and sub-Tropics, though influenced vitally by the West, still in essence retains its own civilizations, but is under Western guidance in economic matters. It must, however, be clearly recognized that the economic independence of the dominions has only been reached gradually within the last seventy years, and that during the past three-quarters of a century colonies have been moving out of the directed into the self-directing group all the time, Rhodesia and India being the latest recruits. But prior to the grant of self-government to Canada the economic life of all colonies was directed from home, whether they were colonies of racial expansion or merely trading stations. Economic self-determination is a new

[1] Before 1911 the Dominions were called self-governing colonies, the paternally governed colonies were then called Crown colonies. Now they are simply styled the Dominions and the Colonies.

feature in British colonial history, and is the outcome of self-government.

The self-directing regions furnish such world staples as wheat and meat in large quantities, they have great mining industries and they are primarily developed by white labour working with European standards and safeguards such as Factory Acts, Mines Acts, and compensation for accidents. Town life, a money economy, free contract, free choice of an occupation are all part of their European economic heritage. They are bound neither by custom nor religion. They are all economically speaking in the twentieth century. They comprise parts of two continents in Canada and South Africa and the whole of a third, Australia, and three large islands, the North and South islands of New Zealand and Newfoundland. Southern Rhodesia should also be included in this group as it is predominantly a region of Western expansion although it lies within the Tropics as does also one-third of Australia.

The units of this Empire have become responsible for their own finance, their own law, their own commercial and labour policy, the disposal of their own vacant lands, the building of their own railways, and the development of their own resources.

The tropical Empire contains about twenty-one times as many people as the Dominions.[1] It consists chiefly of coloured peoples in every period of economic development from the Stone Age to the stage of early sixteenth century England, which is characteristic of the larger part of India. These peoples are being played on by twentieth century forces, but they are not of the twentieth century as yet, although certain cultured and educated individuals in them may be quite modern.

They are not regions where the white man can settle, found a home, and rear children, and therefore partly for this reason and partly owing to the fact that they are already fairly densely settled, they are not regions of Western civilization. Great Britain has been, and, with the exception of India, still is responsible for their trade policy, their financial system, the welfare and development of the country and the indigenous inhabitants. They are regions of directed development.

They include the great West African block of colonies—

[1] See Appendix.

Gambia, Sierra Leone, the Gold Coast, and Nigeria, the Central African block of Northern Rhodesia, Nyasaland, and Uganda, the East African block of Tanganyika, Kenya with Zanzibar, and the Suez Canal block of the Sudan and Somaliland. In Asia, and its waters, Ceylon, Malaya, North Borneo, Hong-Kong, Mauritius, Fiji, and Papua are also regions of directed development. The West Indies belong to this group, although the influence of Western civilization is probably larger in this region than in any other tropical colony. Their population is, however, predominantly coloured, and their economic structure is not that of the Western world.

India, like the West Indies, is difficult to classify, as she is now in process of deciding her own type of economic life for herself. Factories and iron works both form part of her equipment. To that extent she is in the twentieth century economically speaking. But as two-thirds of the people still live by a backward system of agriculture and expect their deficiencies to be made up, as has been cynically said, by God or the Government, India still belongs to the category of directed regions. A small number of persons speaking English as their common language may guide the destinies of the 319 millions of India, a semi-westernized oligarchy of educated Indians may put on tariffs, work the railways, and start a mercantile marine, but the three hundred million illiterates will need paternal direction for a long time to come.[1] Nor is India in any sense an expansion of Western civilization. Although her government is practically as free as that of a dominion to direct the economic life of India, her economic structure is still fundamentally non-modern. Representative government exists only on paper, and is probably never heard of by the masses of India.[2]

[1] There were in 1911 18·6 million literates out of a population of 315 millions. Out of the 247 millions of British India only 8·38 millions are under instruction. "In other words all but 3·39 per cent. of this vast population is still untouched by the existing educational scheme. Of the male population 5·59 per cent is under instruction, and of the female only 1·18."—*Moral and Material Progress*, 1923, p. 233.

[2] "When it is remembered that of approximately 250 millions of people residing in British India in the areas affected by the reforms there are only one million voters for the Legislative Assembly, that of these one million only 182,000 polled at the last election, and that a considerable proportion of these were illiterate, it will be realized that India has still a long and stony path to traverse before she can be said to enjoy representative Government in any true sense of the term."—*Report of Indian Trade Commissioner*, Dept. Overseas Trade, 1922, p. 27.

The self-directing Westernized regions, as the term "Dominions" implies, are practically independent nations in a virtual economic alliance with Great Britain on the basis of preferences and loans. The Colony group are governed paternally and their resources developed not for the benefit of the mother country alone but for the benefit of their inhabitants, the Empire and the world; they are essentially an Empire "in trust".

In spite of the fundamental divergences of colour, language, race, settlement, climate, and different stages of economic development, of dependence or independence, the Empire has still an underlying unity based on common interests in the tropical possessions, common interests in trade as buyer and seller, common interests in finance as borrower or lender, common interests in defence, common interests in scientific discovery and its application, and the whole is bound together by a network of swift communications. To both Great Britain and her colonies their partnership has been mutually advantageous, and the Empire has a common ideal towards which it consciously strives or towards which it is guided.

The Empire partnership has become strikingly emphasized in the common task of the administration of tropical regions in that to the colonies of racial expansion have been delegated tropical colonies of their own. British New Guinea, acquired in 1884, was taken over by Australia in 1901, and renamed Papua. To this the German part of New Guinea was added by mandate. Since the war New Zealand has also been given a mandate for Samoa and the Union for South-West Africa. Thus, three of the self-governing regions have a tropical colony apiece. The Canadian West Indian trade has been conducted on a basis of reciprocal preferential treatment of goods since 1912 and steamer lines have been subsidized by Canada to develop the trade between the two regions. South Africa, too, is vitally interested in Rhodesia, Tanganyika, and Kenya. Thus, not merely Great Britain but the whole British race beyond the seas is interested in the tropical regions and their problems.

Apart from the common task of the administration of tropical areas, inter-imperial trade is growing so rapidly that economic ties and not merely the responsibility for coloured races are tending to make the British Empire more of a commercial unit although its parts differ so fundamentally.

The whole Empire is at present bound together by a network of trade relations, trade commissioners, and preferential tariff agreements between the various parts as well as between Great Britain and her overseas dominions, though the two latter are recent developments, since 1897, in fact.[1] Up to the first half of the nineteenth century the colonies now self-governing were not very prosperous and received grants from Great Britain and other help such as preferences for their products. The unity was created by the necessity of obtaining financial assistance or defence. Their rapid stride to prosperity and financial independence in the second half of the century has been largely due to the growth of industrialism in Great Britain, the open market for colonial raw materials and foodstuffs afforded by the free trade policy of Great Britain, and her unexampled facility for disposing of every kind of product which has made her the agent-general of the world. The unity then was not a unity created by dependence but that of trade and investment. Barred out as were the products of Canada and Australia by the high tariffs of the United States, they became increasingly focussed on the British market.

In addition to the growing importance of the British market to the colonies and the growing importance of the colonial market to Great Britain, the growth of inter-imperial trade of recent years has knit the Empire still closer. Gunny bags (i.e. jute bags) from India were required by Australia when her wheat export became large as it did after 1900. She had long been one of the great consumers of Indian tea. The growth of cocoa on the Gold Coast, the export of palm kernels and ground nuts from Nigeria, Sierra Leone, and Gambia increased the demand for bags in which to export the cocoa beans and palm kernels. Thus, India and Australia and India and the West Coast became commercially interlocked.

Canada in 1913 imported no less than 20 million dollars'

[1] It is interesting to see how widespread is the tendency towards preferential tariff arrangements between other countries and their colonies. Mr. Bruce, speaking at the Economic Conference of 1923 and quoting from the recent United States Tariff Commission, said: "The United States has a differential tariff for its possessions as against foreign countries which on the average amounts to about 100%. Japan gives 100%, France 50% to 80%, Portugal 50% to 90%, Spain 50%, Italy 50% to 90%. There are two countries which do not protect their colonies, namely Belgium and Holland. . . . As far as Holland is concerned, she does a great deal to help them through insisting upon their shipping in Dutch boats only and she assists them in other ways."—*Cmd.* 2009, p. 689.

worth of goods from those parts of the Empire outside Great Britain, of which the largest item came from India.

Much of the raw cotton of Uganda has found its way to Bombay, and Kenya imports rice and piece goods from India. Indian and Burmese rice is largely exported to the West Indies, and there is a considerable trade between South Africa and India.

The growing importance of the trade between the various parts of the Empire outside Great Britain is a recent development of the twentieth century.[1]

This does not mean that the Empire is self-sufficing. Petroleum and raw cotton are at present mainly obtained outside the Empire. While it is possible for Great Britain to satisfy all her food requirements from within the Empire, she obtains the bulk of her cane sugar from places outside, like Java and Cuba, and she draws a large part of her meat, wool, and wheat from the United States and Argentina.[2] Most of the great staples such as lumber, wheat, meat, dairy produce, wool, and various metals are, however, obtainable in sufficient quantities within the Empire.

Again, this does not mean that these staples are sold to the Empire. The biggest market for Canadian lumber is to be found in the United States. Japan, the United States, and before the war of 1914, Germany, were to be found competing eagerly for fine merinos at the wool sales held in Australia. Before the war Indian rice and hides went mainly to Germany, and Indian ground nuts to Marseilles, and in 1922 the bulk of Indian exports still went to the continent of Europe, although the bulk of the imports were of English origin. Of the two great staples produced by Malaya, tin and rubber, by far the larger

[1] Goods consigned from India to Trinidad 1921 equalled £122,390 in value, to British Guiana £37,184, Barbados £12,571, Jamaica £43,488.—*Dept. Overseas Trade Report, W. Indies*, 1922, p. 16. From South Africa the exports to India were £1,266,649, and the imports £1,328,356 in 1921.—*D. O. T. Report on Union of South Africa*, 1922.

[2] In the future South America must inevitably compete more and more with the British colonies. Her rivers are navigable almost to their source and that means the penetration of the larger part of the whole continent, since the Andes are on the extreme west. She has fertile plains and tropical highlands. Brazil has been pronounced by an expert on tropical agriculture to be one of the greatest tropical lands of the future. (Willis, *Tropical Agriculture.*) As emigrants are being increasingly barred out of the United States the flow of Italians will probably cause a more rapid expansion in South America. Should South America develop it will be even more of an advantage for the overseas parts of the British Empire to be organized on a basis of economic alliance with England than it has been in the past.

quantity goes to the United States. Both Canada and South Africa draw on the United States for a large part of their agricultural machinery. In the twentieth century Canada has taken the bulk of her imports from the United States, although the bulk of her exports went to England.

In one respect, however, there has been a monopoly within the Empire and that is in finance.

One of the most striking features of imperial economic history in the past century is to be found in the ease with which the British colonies have been able to obtain their capital in England. While the British free trade market was open on equal terms to the colonies, Argentina and Java, British capitalists and the investing public were willing to furnish capital at cheaper rates to the Empire than could be obtained by lands outside. As they were British the colonists were expected to repay punctually what they had borrowed. In the tropical regions the very presence of Great Britain insured law, order, and solvency. It was no light privilege to be connected intimately with the central money market of the world and to have colonial government stock included in 1900 in the magic list of trustee securities. It has meant cheap and rapid development, and, above all, railways for which England found the capital. The railways combined with the steamships have been the foundation of colonial prosperity, since on mechanical transport has rested the ability of the colonies to buy, sell, and attract emigrants. Transport facilities have equally been the foundation of India's economic prosperity in that they have not merely created a great export trade but have helped to maintain order to a degree never experienced before, and have helped to relieve famines. The possibility of obtaining abundant supplies of capital has enabled colonial and Indian development to proceed with a rapidity that is almost a miracle. Sir Edgar Speyer in a paper on the Export of Capital quoted in *The Times* of 28th May, 1911, said that the lower rates at which British colonies had borrowed up to that date meant a saving to them of £10,000,000 a year "which constituted a handsome preference".

Some idea of the enormous assistance which their connexion with the great money market, England, has been to her overseas possessions can be seen from the fact that up to the end of 1909 no less than 1,554 millions sterling of British capital had been invested in the colonies

and India, the Indian Government had been able to borrow at the average of 3·21 per cent and the colonial and provincial governments at 3·71 per cent, colonial railways at 4 per cent, and Indian railways at 3·87 per cent.[1] Excluding the United States, Great Britain has provided more capital to Canada than to any other country.[2] The amount of visible capital lent to her by England was 373 million pounds up to 1910. Including invisible capital, i.e. loans on mortgage, purchase of land for business, the amount annually furnished was approximately 40 millions sterling per annum. "Practically the whole of the capital which has been spent upon railway construction in Canada has been provided by the investors of Great Britain . . . In recent years the ability of Canada to obtain all the capital she needs for the development of her natural riches has stimulated the growth of her population in a wonderful manner."

To Australasia the visible amount lent up to 1910 was 380 million pounds, i.e. 301·5 millions to the Commonwealth and 78·5 millions to New Zealand. The money lent to the Australian Governments has been mainly employed by them in railway building and thus the railways of both Canada and Australasia have been almost entirely constructed by means of the capital supplied by England.

During the same period 351 million pounds had been invested in South Africa. Of this 125 million was the capital furnished to the mining companies and 73 million the capital of the land and investment companies, including the British South African Chartered Company (8¼ million); 97 millions sterling in addition were lent to the various governments.

The investments in India totalled 365 million pounds, the larger part of which was for the construction of railways. Some of that was lent direct to the Government, which employed it on railway building, but other investments were made directly in railway companies. These linked up district with district, stimulated movement in a stationary country, and created a unity.

To Canada, Australasia, and South Africa alone the sums lent amounted to 1,100 millions sterling, i.e. a population which in 1911 was only 14 million whites could, on the basis of

[1] Paish, "Great Britain's Capital Investments in Individual Colonial and Foreign Countries," published in *Journal of Royal Statistical Society*, January, 1911.

[2] Op. cit., vol. lxxiv, 1910–11, p. 177, from which the following figures are taken.

British credit, acquire these huge sums for their development at a low rate of interest. Beyond this Great Britain has found a great deal of invisible capital for mercantile and other purposes.

" The rapid progress of Canada, the recovery in Australia, the improvement in South Africa, and the prosperity of India at the present time clearly shows how potent are the influences upon the progress and development of the Empire of the large amounts of capital with which British people are now so freely supplying to these lands." [1]

The same is true of tropical possessions of the Crown outside India. One of the great authorities on Africa has put it as follows :—

" The principal fact in Africa as in Central America is that all backward or newly opened up countries are in need of capital, of money with which to develop their resources, improve their conditions of life, and rise to greatness in nationhood. In course of time the white peoples of North and Western Europe and of North America have accumulated an enormous wealth in money, a monopoly almost of skill in machinery and an unconquerable degree of energy in combating Nature and subduing her to man's will. They are prepared to place these resources at the disposal of the backward peoples provided they get reasonable security that their money will be safely invested, their skill rewarded, and their energy prove not unprofitable. Under native governments other than those of Southern South America and Eastern Asia, this security is completely lacking. Therefore, Abyssinia is unable to build railways, to develop her mines and her great vegetable wealth ; Afghanistan still remains a semi-barbarous country, scarcely emerged from the Middle Ages ; Arabia is in a similar condition. Liberia was founded as a state only a few years later than Sierra Leone or the Gold Coast. Yet look at the difference there is between the condition and realized

[1] Paish, op. cit., p. 181. Of the young countries unconnected by ties of Empire and race the largest amount, outside the United States of America, had been lent to Argentina, 269 million pounds chiefly for railways (186 million) and tramways (19 million). There are, in fact, certain regions which though they do not belong to Great Britain are in reality her financial colonies and of these Argentina is a great example. In that country are to be found English railways, English managers, English coal, while the people of Argentina in their turn depend on the English market for wool and frozen meat and English shipping for transport. In the Tropics, Java, Sumatra, and Mozambique may perhaps be regarded to some extent as British financial colonies.

wealth of this West African Negro Republic and these two British West African states." [1]

What is true of Sierra Leone and the Gold Coast is true of all the British Tropics. Where Great Britain establishes security for life and property British capital follows and a rapid development ensues.

Sir George Paish calculated in the article just referred to that to West Africa the amount lent up to 1910 totalled 29 million pounds, of which 12 millions were invested in mines and 8 millions were lent to the Government mainly for railways.

In the Straits Settlements and the Malay States out of loans of 22 million, 10 million were invested in rubber companies and 8 million lent to the Government.

In addition to the money found by the investing public, the Government has also given large sums for tropical development,[2] and has guaranteed since 1920 loans for public works in various British tropical colonies. Credits to the extent of 50 million pounds have been authorized for Europe and the colonies under the Trade Facilities Acts of 1920 and 1921. Up to 30th September, 1923, £29,476,645 had already been guaranteed.[3] Over and above these sums £9,500,000 were specifically guaranteed for the Sudan to provide railways and irrigation necessary for cotton growing in that region.[4] This marks a new stage in the relations of the British Government and the tropical colonies, in that the Government was willing to pledge the credit of the British nation so that certain colonies might obtain money on easier terms. But, at the same time, the purchases were intended to relieve unemployment in England.

The partnership is, however, not merely a partnership in responsibility for the Tropics or a mutually advantageous partnership in trade and finance, it is also a partnership in defence. The self-governing dominions have received protection from Great Britain which has enabled them to develop along their own lines. The desire to exclude Chinese, Indian, or Japanese labour, for instance, which is a marked characteristic of the policy of the self-governing dominions,

[1] Sir H. Johnson, in *Journal of the African Society*, April, 1919, p. 168.

[2] See pp. 94 7.

[3] I have been unable to obtain figures as to the amounts specifically devoted to the colonies. The quarterly returns merely give the lump sum. *HC.* 49 of 1923.

[4] *Hansard*, vol. 161, pp. 717–18. £6,000,000 was granted on 15th August, 1919, and £3,500,000 on 13th January, 1923.

could not be effectively realized without the protection of the British Navy. Five and a half million Australians could not keep out four hundred odd millions of Chinese, or even the fifty-six millions of Japanese were it not for the naval power of Great Britain in the background.[1]

In return the Dominions, the Dependencies and India have willingly furnished men for military or naval service if the Imperial partnership has been threatened, as in the Boer War of 1899 to 1902 or in the war of 1914–18. The very existence of these regions with their vast possibilities adds to the prestige of the Empire and in itself is an insurance for the whole.

As far as Great Britain is concerned she has derived an immense advantage from the specialization of her Empire. German economists have animadverted on the terrible insecurity of England's position—an island depending on its sales for the bulk of its food supply and raw materials. What would happen, they said, in time of war? What would happen when these new countries took to using up their own food and raw material? What would happen if the trusts chose to corner the world's supply of meat or wheat and withhold them from Great Britain? What actually did happen in time of war was that Britain was able to draw on the great resources of her Empire with ease. The wool of Australasia and the Cape, the wheat of Canada and the minerals of the Empire, including the tin of Malaya, the palm-oil of Nigeria, and the varied resources of India were at the disposal of Great Britain, and the British Navy saw that colonial goods reached their market. Any attempt to corner the world's supplies can easily be frustrated by such a big unit as the Empire which can simply pre-empt them. To a people that has seen the whole Canadian grain supply or the Australian wheat and wool production pooled during the last war, this presents no difficulty. That local sentiment will demand a colonial manufacturing development is no doubt inevitable, but such a development has often in the past given rise to a demand for more imports of machinery and high-class manufactures as the standard of living rises. Was not

[1] It is, of course, possible to argue that neither Argentina nor Chile have had the benefit of the British Navy, nor have they needed it. But there was the Monro doctrine which protected them to a certain extent. Nor have they tended to attract the Orientals which both Australia, Canada, and South and East Africa have found such a problem.

Germany before the war the second best customer for British manufactured goods? Should the self-governing dominions follow the example of the United States and bar themselves in behind protective tariffs there will still be the great tropical areas, which are selling in increasing quantities and are therefore immense potential markets.

The trend of England's trade in the past has been the substitution of high-class specialities for the cheaper type of goods. The growth of highly technical financial services has accompanied her world-wide shipping activities and the development of imperial trade within or without the Empire can but add to the work of the great financial mechanism centring in this island. Should the Dominions and India one day consume their own food supply as seems imminent in the United States, with her expanding population, are not the Tropics the greatest potential sources of food supply in the world? The Tropics and sub-Tropics are destined to bulk larger and larger in imperial economics.

The very development of the United States and her colonies has enabled England to specialize on manufacturing and she has simply relied on the food and raw material production from the outer fringe. The British Empire is, in fact, a great agricultural unit with a specialized centre. This division of labour has helped Colonial development and British development, and has been beneficial to both.

While mutual economic advantage exists and is a strong tie, it might not in itself have been strong enough to create the existing unity of the Empire. In what does the fundamental unity of the Empire consist? Is it the Crown? The common loyalty to the Throne is no doubt an important tie, but it is hardly conceivable that the Empire would break up even if Great Britain, which is unlikely, should become a republic. Is the tie political? No common mechanism existed except the Imperial Conferences begun in 1887. These did not include India till 1918, and only in 1923 did the Colonial Under-Secretary for the Colonies represent the interests of the British Tropics at the Imperial Conference. There are, it is true, two great offices in Whitehall, one for India and one for the Colonies and Dependencies, but it is not the Colonial Office that makes for unity except it be a common unity of criticism. It is not language, nor literature, nor law, nor colour, nor race. These all vary.

The real unity in the nineteenth century was largely

made possible by the development of swift communications—posts, telegraphs, newspapers, and ease of travel—so that the parochial outlook and provincialism tended to become obliterated and a common ideal and the same working plan could penetrate the whole. The unity is therefore the outcome of economic causes. It is also a recent development of the last half-century. The inventions in communications had scarcely penetrated beyond Europe by 1860; the cable was not laid to the United States till 1866; and the Empire overseas was not really affected by the revolution in shipping and cables till the 'eighties. Since that date there has been the gradual development of a sense of alliance and trusteeship.

That modern communications are the fundamental tie becomes clear when one recognizes that the first really imperial body is the Imperial Shipping Board. It is an advisory committee on shipping set up, officially, as a result of the strong recommendations of the Dominions Commission as to the importance of the development of more rapid and more efficient inter-Empire shipping facilities.[1] The Imperial Shipping Board began its work in 1920, and its importance lies in the fact that it reports not merely to the Prime Minister of Great Britain but to all the Governments of the Empire. It is subject to no one part of the Empire, and to no one Parliament. It investigates imperial shipping grievances, settles inter-imperial shipping disputes such as that about the deferred rebates, and it has initiated common action in the matter of liability for pilferage under bills of lading within the Empire. It has devised plans for more rapid communications between Australia and England by a combination of air and steamship services, and it has dealt with the question of the income-tax to be levied on shipping earnings within the Empire. Its decisions have hitherto been unanimous.[2]

[1] "So long as freights are cheaper, and means of communication better, between the Mother Country and the Dominions Overseas, and between the Dominions themselves than between foreign countries and the Dominions, so long will trade naturally follow Imperial channels."—Dominions Commission, *Cd.* 8462 (1917), p. 108, § 525.

[2] *Report* of Professor Sir Halford Mackinder to *The Imperial Economic Conference*, 17th Oct., 1923. *Cmd.* 2009, 1924, p. 293 ff. At the same Conference General Smuts made a great point of increasing the facilities for communications, especially the development of airships. "The question of communications is probably the most important of all for the British Empire. One may adapt a legal phrase and say that communications are of the essence of our Empire, and unless we succeed in solving

While an imperial organization for shipping functions with such success, another common tie is found in the elaborate mechanism for research into tropical diseases and pests. Every important colony now has its scientific departments, and England is the clearing-house for the common knowledge.

The work on insects is co-ordinated by the Imperial Bureau of Entomology, founded in 1913, which absorbed another research committee founded in 1909 to deal with the insect pests of the Empire. To its expenses the dominions, India, and the Crown colonies contribute, as well as the Imperial Government. An Imperial Bureau of Mycology was also founded in 1918 to deal with fungoid pests. An Imperial Mineral Resources Bureau, founded in the same year, deals with the mineral resources of the Empire. Empire Forestry Conferences have been held in 1920 and 1923, and it is proposed to set up an Empire Forestry Bureau to co-ordinate the work of forestry research in different parts of the Empire, and to establish a training college for foresters at Oxford.[1] While the two great schools of Tropical Medicine at London and Liverpool, founded in 1899, cure sufferers, train doctors, and do research work, the great thing is to get this knowledge circularized. Here the Tropical Diseases Bureau comes in. It was founded to collect and distribute information about tropical diseases, its cost again being defrayed from contributions by the Dominions, India, and the Protectorates. There is also a tropical diseases research fund founded in 1904 and administered by the Colonial Office with an advisory committee. In 1909 a special advisory Medical and Sanitary Committee was set up for Tropical Africa. Thus, the whole Empire meets on a common scientific ground and is mobilized against the insects which destroy man or render him less fit and against the insects and fungi which destroy the plants by which he lives and from which he gains not merely his food but his raw materials.

While an imperial mechanism is in process of evolution the imperial idea is the great binding force.

The British Empire stands for tolerance and the develop-

some of the urgent problems of communications—more rapid and cheaper communications—it will be almost impossible in the future to hold together this vast Empire scattered over the whole globe. The Empire is developing in all its constituent parts to such an extent that unless we can solve this problem of communications the machinery for working this Empire will fail."—Ib., pp. 48–9.

[1] *Imperial Economic Conference*, ib., p. 581 ff.

ment of individuality—whether it be that of Dutch Boers in Africa, Dutch burghers in Ceylon, French Canadians, Hindu rajahs, Malayan peasants, or African savages. It stands for justice according to law, however diverse the legal systems may be. It aims at honest administration, budgets which balance, peace and order. It stands for the fighting of plague, pestilence, and famine. It enforces the principle that the strong may not eat, burn, kill, enslave or oppress the weak. It insists on the fair treatment and not the exploitation of native races. So common is this ideal within the Empire that Great Britain had no hesitation in delegating part of New Guinea to Australia, and the principle is so well recognized as an imperial principle that the League of Nations gave a mandate for Samoa, Tanganyika, and South-West Africa to various units of the Empire. There is a high ideal of responsibility and welfare throughout the whole British Empire.

A strong tie between the self-directing dominions and Great Britain lies in the common history and tradition connected with the English name and race. It is in a common inheritance of great achievement that a race finds itself. But what does this signify to the undeveloped peoples of the directed Empire? They cannot thrill with the story of the victory over the Armada or of Nelson at Trafalgar. The triumphs of Lister, Faraday or Ross; the supreme achievements of the English engineers which in the nineteenth century gave man the control over the worst of the physical obstacles arrayed against him, have no meaning for them as imperial achievements. With the bulk of the coloured peoples it is a personal matter—it is the Viceroy or Governor and his officials, all the products of the British system,[1] who in exile create the loyalty to the rule of England and in themselves embody the British aims of peace, security, justice, health measures, roads, railways, bridges, the economic development of the country, the preservation of individuality, tolerance, and personal freedom.

These economic and political ideals became common to the British Empire as a whole in the nineteenth and twentieth centuries.[2] It is common thinking that has created

[1] Members of the self-governing dominions also share in the government of the British Tropics. A Canadian, Sir Frederick Guggisberg, is Governor of the Gold Coast, and another, Sir P. Girouard, one of the railway builders of the Empire, has been Governor of Northern Nigeria.

[2] "The right and freedom for different nations to preserve their own language and traditions and sentiments within a single political com-

a unity which is not uniformity, and that common thinking has been fostered by the growth of communications.

We have seen that in the old Empire the colonies were regarded as estates that should increase the wealth and power of the mother country, and that their economic development was directed to that end. We have also seen that it was succeeded by a period of *laissez faire* as a policy, and although heavy obligations were shouldered they were not willingly shouldered—the ideal was "to cut the painter". The policy and attitude of the new era was to recognize a connexion where both sides gained. England supplied the capital, an unequalled service of ships, and offered the freest and largest market in the world, the component parts of the Empire as they grew added to the prestige of Britain and increased her safety by providing reserves of food and raw materials within the Empire.

The underlying economic unity has been well expressed by Mr. Joseph Chamberlain, Secretary for the Colonies between 1895 and 1903, and the inspirer of much of the new policy continued and elaborated by his successors whether Liberal or Conservative.

"I appeal to you as fellow citizens of the greatest Empire that the world has ever known, I appeal to you to recognize that the privileges of Empire bring with them great responsibilities. I want to ask you to think what this Empire means, what it is to you and your descendants. I will not speak, or at least I will not dwell, on its area greater than that which has been under one dominion in the history of the world. I will not speak of its population, of the hundreds of millions of men for whom we have made ourselves responsible. But I will speak of its variety and of the fact that here we have an Empire which with decent organization and consolidation might be absolutely self-sustaining. Nothing of the kind has ever been known before. There is no article of your food, there is no raw material of your trade, there is no necessity of your lives, no luxury of your existence which cannot be produced somewhere or other in

munity has been acknowledged, and this is the basis of English policy in all parts of the world. There is no other great civilized community in modern times which has shown itself ready to take this line; in the United States the need of assimilating the alien immigrants is constantly before men's minds. The Tories and Loyalists were thrust out after the successful struggle against the British Crown and there is a determination so far as possible to keep out those who do not easily adapt themselves to American conceptions of citizenship."—Cunningham, *Growth of English Industry and Commerce*, vol. iii, p. 882.

the British Empire if the British Empire holds together and if we who have inherited it are worthy of our opportunities. . . . They have cost us much in blood and treasure ; and in past times as in recent, many of our best and noblest have given their lives or risked their lives for this great ideal. But it has also done much for us. It has ennobled our national life, it has discouraged that petty parochialism which is the defect of all small communities. I say to you that all that is best in our present life, best in this Britain of ours, all of which we have the right to be most proud is due to the fact that we are not only sons of Britain, but sons of the Empire."[1]

Although there is this underlying unity, partly economic, partly idealistic, scarcely anything can be more diverse than the populations of the various regions. The success with which these populations have become part of the Empire is due to the common ideal of tolerance of other points of view creating a unity in diversity.

" I think that this is the fundamental fact which we have to bear in mind—that the British Empire or the British Commonwealth of Nations does not stand for unity, standardization, or assimilation, or denationalization ; but it stands for a fuller, a richer, and more varied life among all the nations that compose it. And even nations that have fought against you, like my own, must feel that they and their interests, their language, their religious and all their cultural interests are as safe and as secure under the British flag as those of the children of your own household and your own blood." [2]

An all-British population, i.e. a population recruited almost entirely from the United Kingdom, is to be found in Australia and Newfoundland. With the exception of the Maoris[3] in North Island this is also true of New Zealand. These regions are typically British, typically undivided by language, religion, accent, or provincial characteristics of any kind. The reason for this is to be found in the history of their settlement.

In two other regions the white population is of European stock, i.e. British and foreign. In Canada, with the exception of the Indians and Eskimos,[4] the population consists of two

[1] *Chamberlain's Speeches*, ed. Boyd, 6th Oct., 1903, p. 153.
[2] " Speech by General Smuts," 15th May, 1917, quoted Egerton, *British Colonial Policy in the Twentieth Century*.
[3] They numbered 52,554 in 1921. *Statesman's Year Book*.
[4] They numbered 105,998 and 3,296 in 1917. Op. cit.

very different races, a race of Latin stock and fervently Catholic in religion, and a Protestant English stock. The former looks to authority, to the priest or the Government, as becomes the descendants of France of the ancient régime. The other is essentially individualistic, being recruited largely from Englishmen who had migrated originally to the United States, and although much assistance was afforded by the British Government at the start, the colonists had little use for government intervention of any kind, and were the first region to become self-governing. The two races are now segregated, the French being chiefly in Quebec the English in the maritime provinces and Ontario. To fill up the prairie provinces, however, there has been a large migration of Americans from the United States and of Europeans, such as Galicians, Germans, and Swedes. It was thought at one time that the French Canadians with their large families would people Canada, but the predominant type is Protestant and English, owing to the large immigration for purposes of wheat growing and to the fact that the French Canadians migrate in large numbers across the border.

In the Union of South Africa, there are also two European races, the English and the original settlers, the Dutch. Both are of Teutonic race and both Protestant. The problem of the fusion of the two white races is easier in South Africa than in Canada, but until the Boer War the Dutch were in the country and the English in the towns, when Lord Milner did his best, with some success, to mix them up, the English being induced to settle in the country and the Dutchman being given a better type of education which fitted him to play a part in trade and town life.

But there is a third group into which South Africa also comes, viz. a group of colonies of British and coloured stock, such as the Union of South Africa comprising Cape Colony, Natal, the Transvaal, and the Orange Free State. There are also the native territories of Bechuanaland, Basutoland, and Swaziland, under the High Commissioner for South Africa. Southern Rhodesia and Kenya both belong to this class of colony containing a large European element and coloured indigenous peoples. Africa, even south of the Zambesi, can never be wholly a white man's colony. If one includes Southern Rhodesia and the native territories there is about one white person to six coloured in South Africa. These coloured peoples provide in the first

place an indispensable labour supply for farmers or for the mines, but the existence of such an overwhelming disproportion of black to white raises problems of the greatest difficulty. Moreover, there are so many grades of natives all presenting separate problems. There is the "blanket Kaffir" living under tribal rule, there is the native on white man's land, the educated native and the coloured man of mixed breed. The economic relations of black and white is one of the most interesting and difficult of the problems of world economics. To what extent shall the native be allowed to acquire land from the white or vice versa? Shall he be kept in reserves or allowed to mix freely with the white population? Should he be trained or educated, and in what manner and in what language? Shall he be allowed to vote, and being numerically superior out-vote the white man, or shall the vote be denied or restricted? To what extent shall the tribal authority of the chief be kept intact or the white men rule the native reserves? Is it equitable or desirable that the Kaffir be forced to engage in wage labour by taxation or other means? All these problems crop up in South Africa at present.[1]

Not merely is there the question of the administration of a backward but numerically predominant negro population, but the native races in South Africa, instead of dwindling, like the Australian aborigines, the Maoris, or the Canadian Indians, have thriven and multiplied. This black labour excludes European unskilled labour partly because it is so much cheaper, and partly because of the "colour bar", which makes it *infra dig* for the white man to do manual labour which is Kaffirs' work.

[1] "Take South Africa. Of all the problems the British people have had to face that problem is going to prove, in the centuries to come, the most trying. In India you have an ancient civilization, old religions, all the material which gives cohesion to the thought and spiritual life of the people. In Africa you have nothing of this; you have a Continent which, for thousands of years as far as history goes, contained millions of people not one of whom ever wrote a book, built a bridge, invented a machine, painted a picture, built even a kraal which might not be burnt and set aside to-morrow. That has gone on thousands of years, and now we are among a population which is going to increase in an immensely increasing ratio since we have given them security. We have to prevent ourselves in the first place being dragged down as whites are unless they hold high moral purposes before them when they come into contact with lower races. We have to elevate them with this depressing condition, that the closer you lift them up towards the level of our own civilization, the more intense does the line of division become."—Dr. Parkin in discussion on Ireland's paper, *British Civilization in the Far East*, 1904–5, xxxvi, p. 538.

There are therefore too many would-be clerks in the Union which suffers from a "matriculation craze". There is at the same time an acute shortage of labour in certain parts of Africa, as the native does not work regularly, and an attempt was made in the past to meet it by importing Malays, Indians, and after 1886, Portuguese negroes for the mining on the Rand. Thus, there has arisen in South Africa a third racial problem, not merely the relation of Dutch and English, black, i.e. negro to white, but the relation of the brown men to both.

A fourth problem arises out of the necessity for importing about half the labour supply for the Rand from Portuguese territories. On the gold mines hinges practically the economic prosperity of South Africa. The Portuguese Government can paralyse that prosperity by forbidding its natives to enlist for service in the Transvaal. It only permits this recruitment on the condition that a certain proportion of the imports and exports pass out by Delagoa Bay. These Portuguese workers are returned after a certain period, but the Indian population has settled. This raises another racial problem, as the Mahommedan trader who has followed the coolies competes with the white man.

The difficulty is that the brown man can do (as the negro cannot as yet) many of the white men's jobs, and do them cheaper, and there is the economic rivalry of Asiatic and European. With the greater ease of migration since the days of steamships, Africa, like Australia, has become involved in the Pacific problem. The result is that Asia is beginning to move, and the thorny question of the exclusion of Japanese, Chinese, and Indians as immigrants is another of the great links between Canada which touches the question in British Columbia, Australia, and South and East Africa. All want white population, English if possible, but the inhabitants of the United Kingdom were in 1911 only 47 million, and a town-bred people, and they went for preference to a country like the United States of America where industries were developed. On the other hand, here are these great empty spaces and a teeming Asia. Asia is overcrowded, and helped by steamships and railways her peoples threaten to migrate for raw materials or land and they are deemed to undercut and crowd out Europeans.

The Union of South Africa, although a self-governing dominion, is only self-governing as regards the predominant white population. While large numbers of native populations

are under the rule of the Union Governments, Swaziland, Basutoland, and Bechuanaland are isolated and placed under the rule of England in the shape of the High Commissioner for South Africa appointed by the British Government. South Africa is therefore the link or intermediary stage between the economically independent and the predominantly coloured Empire. But these colonies of white and coloured stock, i.e. the Union, Rhodesia, and Kenya, are also regions of racial clash unparalleled elsewhere in the Empire.

The second Empire, which is concerned with the tropical or sub-tropical regions, is an Empire of directed development. The inhabitants under British control differ not merely in race but in types of civilization, and are in different economic periods, representing both the primitive and the mediæval worlds. From an economic point of view they may be divided into the agricultural Empires of ancient civilization, the plantation colonies and native colonies. The two great agricultural Empires incorporated within the British Empire in the nineteenth century were India and Egypt. India with its 319 millions, three-fourths of which are supported by agriculture, is a region of ancient culture, and the tie between the different sections of the inhabitants is their religion. Hindus, Mohammedans, Parsees, and Christians are all separate communities with their own personal law. There is no real nationality as yet, though it is rapidly developing.[1] About two-thirds of the area is under British rule, and one-third under native princes. That portion directly under the British is passing from the rule of an efficient, disinterested, but foreign, bureaucracy, to the rule of an oligarchy of educated natives. In some respects British India has approached more and more to the status of a self-governing dominion since the war of 1914. She settles her own tariff, her own industrial and commercial policy, and sends her own representatives to the Imperial Conferences, which were only attended before the war by representatives of the self-directing regions. India, like the dominions, is starting some industries of the factory type, and the slow progress of her industrial revolution is due to the fact that her cultivators are unwilling to take up factory work, and her engineering side is but little developed so that she has few skilled engineers of her own.

[1] "Much of India may still be regarded as the best surviving specimen of the ancient world on a large scale."—Holdernesse, *Peoples and Problems of India*, p. 66.

Egypt was a British Protectorate for a short period during the war. Prior to that she acknowledged Turkey as her suzerain and paid tribute. She is now independent as regards her internal affairs, and cannot therefore be included within the present survey. But England directed her economic development from 1879, when she helped to depose Ismail Pasha, and had to consider in Egypt much the same problems as she had to grapple with in India. Like India, Egypt is an agricultural area of ancient civilization rescued by England from anarchy approaching that of the Middle Ages in Western Europe. Security and irrigation have been the economic salvation of Egypt, as they have been of India. She was brought from financial ruin to solvency and is a striking testimony to the success of British Imperial economic policy which helped to turn a mediæval into a modern state. Like India, she is aspiring to carve out her own economic and political destiny and the British Government arranged to provide her external defence and left her free to arrange her own internal affairs. Both India and Egypt have the same fundamental economic problems of small cultivators to whom the failure of the monsoon or the failure of the Nile to rise, spell famine and disaster. Where a numerous and increasing peasantry lives on the margin of subsistence, paternalism is inevitable, no matter whether it be termed democracy or autocracy. Where irrigation on a large scale, either in the Nile basin or on the Punjab canals, is practised there, inevitably, some higher power must step in to erect the works, secure a steady supply of water, study the effect as a whole and dole out the water fairly. Autocracy and large-scale schemes of irrigation go hand in hand.

Thus, if India should attain as complete a measure of self-government as the British racial colonies she would fall economically into a different category. It has not been a question of filling up a manless land with nineteenth century men, but a problem of millions of small cultivators, weighted down by custom and family obligations, the subdivision of the land on death of the owner into tiny fragments, and the pressure of population on the means of subsistence. The typical agriculture up to 1850 was that of the self-sufficing type and the products were not grown primarily for a market. With railways this self-sufficiency is being slowly broken up, and an agricultural revolution of far-reaching effect is being

carried out by which the peasant is beginning to depend upon exchange.

India is so huge that there is room for many types of cultivation, and although the peasant is the real feature of the country, still there are to be found in Assam large tea plantations, and coffee plantations in Mysore and Southern India. The mass of the peasantry are poor, illiterate, and their stamina is sapped by malaria. Thus, the Government plays the part of economic Providence in India to a degree that is not attained in the self-directing regions.

The Plantation Colonies, as their name implies, were for the most part deliberate creations. They were founded by Englishmen to produce certain types of tropical staples such as sugar, tobacco, or coffee, and their prosperity and development has depended primarily on large-scale agricultural production or on the shipping trade. They are based upon the possibility of exchanging goods. They also vary according as their labour is imported or indigenous. The group of agricultural colonies with imported labour under the old colonial system comprised such regions as Virginia and the continental regions to the south of that state and the West Indies, including British Guiana and Honduras. The West Indian group still remain within the Empire, and to it has been added Ceylon, Malaya, Fiji, North Borneo, and Mauritius, all relying on imported labour. The group relying on indigenous labour is represented by the African colonies of Nyasaland, Kenya, and the newly acquired German colonies. Natal was in essence a plantation colony with its tea, sugar, and wattle farms, and its imported Indian labour, but when it joined the Union it became merged in the larger whole of the Union, and the Union economic policy was that of a national state and not that of a plantation colony. To term a place a plantation colony does not mean that there is no agriculture carried on by natives. It does mean that the wealth and prosperity of the country rest on the exchange the planter has developed rather than on a self-sufficing village culture where the products are not grown for a market and where there is little or no surplus.

Ceylon is typically a plantation colony in that its prosperity depends upon the planting community and the port of call, Colombo. While there were in 1911 no less than 1,060,167 Tamils, and 2,715,686 Sinhalese in the island out of a population of 4,110,367, the bulk of the agricultural

work on the plantations was supplied by immigrant labour from India, amounting to 600,000 persons in 1917.[1]

The Federated and Protected Malay States also have a large indigenous population, but their prosperity has been based between 1874 and 1914 on tin mining and on rubber production, i.e. on outside planting and mining undertakers. Neither in Ceylon nor Malaya has the native population in the past century furnished the labour or the trade on which the prosperity of the colony has rested—that has been furnished by alien labour and alien capital. Singapore and Hong-Kong also belong to this category, but they have been "planted" not for the sake of tropical products, but for trade, and are great shipping and exchange bases.

The plantation colonies do not aim at self-sufficiency. Their whole economy rests on the ability to exchange their products or on being, as is Hong-Kong, a nodal point of distribution. The West Indian Islands, being plantation colonies, import all their foodstuffs. Not even the freed negroes attempted a self-sufficing agriculture.

A prominent feature of a large group of these colonies is that the labour supply for the planting or mining industries has had to be imported and has been encouraged to settle. Negro slaves from the West Coast of Africa were the first imported labourers in the West Indies or Virginia. When the British Government emancipated the slaves in 1833, the freed negroes, having few wants, would not engage in wage labour and in order to assist the development of these tropical regions their governments began to arrange for the import of Indian and Chinese coolies.[2] In other places where the native labour was insufficient, labourers were imported from outside, as in Fiji, Labuan, and North Borneo.

In the Malay Peninsula the native does not enjoy the reputation of being energetic, and it is the Chinese immigrants who have been the making of the country. As soon as the British established real order and security after 1874 they arrived in large numbers and developed the tin mining which has been the basis of the prosperity of Malaya. They are also found in Labuan and North Borneo, and have been the real makers of Hong-Kong under British security. Natives of India have also migrated to, or have been recruited for, the Malay Peninsula in large numbers to work

[1] Report by Majoribanks and Marakayar to the Indian Government.
[2] There were 130,000 East Indians in British Guiana, 110,000 in Trinidad, 18,600 in Jamaica. *D.O.T. Report, W. Indies*, 1922, p. 16.

on the rubber plantations. Javanese have also come in as labourers on the estates and their number is increasing. Many of the native people of Sumatra have migrated to Malaya and have started to make rubber plantations. There have been, in fact, during the nineteenth century, three mother countries, England, India, and China. The United Kingdom provided the bulk of the emigrants for the self-governing colonies. From India labour was recruited for Mauritius, the West Indies, including Guiana and Honduras, Natal, British and German East Africa (now Kenya and Tanganyika), Fiji, Assam, Ceylon, and the Straits Settlements. A certain proportion of these Indian coolies have remained in the countries to which they migrated, and have become landowners and traders. Mauritius has become virtually an Indian island, and so has Trinidad. The Indian inhabitants of British Guiana are amongst its most prosperous inhabitants. The migration of Asiatics to places within the British Empire has been as remarkable as the European migration to the New World.

Nyasaland and Kenya with Zanzibar may both be regarded as plantation colonies, although there were in Kenya 9,651 Europeans in 1921, and it borders on the class of colony or racial expansion. It also contained 22,000 Indians and $2\frac{1}{2}$ to 3 million negroes. Both are regions of large estates, both depend upon outside markets and the sale of specialized tropical products—coffee, tea, tobacco, and cotton in Nyasaland ; coffee, sisal hemp, and flax in Kenya ; copra and cloves in the coastal strip, and in Zanzibar.[1] The distinction between these African plantation colonies and those formerly mentioned is that their labour supply is indigenous, although there are many complaints that it is insufficient and irregular. The Germans worked Togoland, the Cameroons and Tanganyika as plantation colonies, and got over the labour difficulty by using compulsion.[2]

The budgets of these tropical colonies are expected to balance, but the British Government, in the shape of the Secretary of State for the Colonies, decides the form of their taxation, and they are free trade in policy, i.e. their customs duties are for revenue only. The Colonial Office and ultimately the British Parliament is responsible for their

[1] Cattle farming is also carried on in the Highlands, but only hides are exported.

[2] The total area taken over in the Cameroons by the Government of Nigeria was 246,181 acres, of which 49,900 were under cultivation. *Cmd.* 468 (1920), p. 73.

economic development, and since the advent of Mr. Joseph Chamberlain as Colonial Secretary in 1895 greater interest has been taken in the tropical colonies than at any previous period of the nineteenth century. He regarded these regions as "undeveloped estates" in which it was necessary to sink capital if good results were to be obtained. His energetic championship was such that Parliament in 1899 granted a loan of £3,351,820 at 2¾ per cent to be repaid within fifty years. The money was devoted to public works, and this grant was followed by further grants for the encouragement of scientific agriculture, cotton growing, the study of tropical medicine, and preventive measures against insect pests. This policy of scientific development was continued by Mr. Chamberlain's successors, and was not merely applied to plantation colonies, but was also applied to a third group of the directed Empire, viz. to the primitive peoples who are governed through a system of indirect rule and native administration.

This group may be termed Native Colonies in contra-distinction to the Plantation Colonies. They contain people leading a nomadic pastoral existence while others in reserves live on the produce of communal cattle herds. The basis of the economic life of one class of natives is the collection of forest produce for sale while others cultivate land either communally or individually. Some of these peoples merely sell a surplus, other native cultivators grow consistently for a market and purchase their necessaries.

In these regions economic control has been exercised through native rulers, and a Nigerian emir or Uganda prince has been made responsible for influencing his people under the advice and stimulus of the British Resident or political officer.[1]

The real economic divergence between the Native and the Plantation Colonies lies in the fact that the former provide their own labour supply and that the planting element is inconspicuous in relation to the total production of the native inhabitants. In this region the Government has

[1] "Let us realize that the advanced communities form a very minute proportion of the population of British Tropical Africa. The vast majority are in the primitive or early tribal stages of development. To abandon the policy of ruling them through their own chiefs, and to substitute the direct rule of the British officer, is to forego the high ideal of leading the backward races by their own efforts, in their own way, to raise themselves to a higher plane of social organization, and tends to perpetuate and stereotype existing conditions."—Lugard, op. cit., p. 215.

to undertake a great deal of the work the planter would do for himself in the way of grading produce, finding markets, and providing new seed. These are regions where savage peoples are being slowly trained to cultivation instead of relying almost entirely on the collection of forest produce or the tendence of communal cattle herds.

Planters are to be found in Uganda where they raise tobacco and coffee, and also in West Africa, but they are not the typical feature of the production of these colonies which would not collapse if the planting element were to be withdrawn. It is the native peasant who is the basis of the economic development of these regions.

Throughout this group there is a definite ideal, the aim of which is to develop the native through his own civilization, yet there is such a tremendous gap to be filled that it is possible that Western civilization will eventually be the dominant type acting through Christianity, education, and such economic factors as scientific agriculture, railways, or trade. In the agricultural Empires of ancient civilization there was another basis to work on, viz. a tradition of high culture in the past.

It is difficult to give any adequate description of the economic structure of these native colonies because each region contains different types of primitive agricultural practices. While the tendency is for a region under the guidance of its Resident or chiefs to pass from a primitive into a less primitive stage, this does not affect all peoples alike even in one area of government.

It is clear that if primitive people are to have medical relief it must be paid for somehow; if they are to have education it must be paid for somehow; if roads are to be made and kept in repair there must either be forced labour or money to pay wages. The necessity for a civilized equipment does tend sooner or later to produce cultivation for exchange even amongst the most primitive self-sufficing peoples, otherwise these services must remain in abeyance.[1]

[1] This can be seen at work in the territory taken over from the Germans in the Cameroons. "It is hoped to establish small dressing stations of the nature of 'Aid Posts' under the direction of the medical officers and staffed by natives sufficiently trained to use simple remedies, who will advise the local inhabitants in sanitary measures. With improved communications it will assuredly be found that not only will the people be able to seek medical advice more freely but that the freer exchange of commodities will raise the standard of living and increase the food supply with the improvement of the health of children."—*Report on Cameroons*, 1922, p. 46.

The Sudan may be taken as an instance of varied types of agricultural production. Its typical economic feature prior to the war was nomadic cattle herding. Cattle meant prestige, and the chiefs would not sell the animals. During the war they were persuaded to sell cattle to feed the troops in Egypt, and a large trade grew up to supply Egypt with meat. The Sudanese chiefs were, therefore, brought into the circle of exchange. Although typically nomadic, some peoples in the Sudan were collectors of forest produce in the shape of gum-arabic, which was the exudation of the trees to cover the wounds made by sand storms. With the recent development of irrigation, the Sudan promises to become a country of exchange cultures in its cotton growing which will be in the hands of natives. Railways are being built, ports developed, and the economic character of the country is being rapidly changed.

British Somaliland, the north-eastern parts of Kenya, large parts of Uganda, and Northern Nigeria are typically lands of nomadic peoples. In these regions there is neither the stimulus of the Egyptian market nor cotton at present. Yet in other parts of Northern Nigeria there is both cotton growing and ground nut culture. Most negro tribes in fairly open country free from tsetse fly depend upon their communal cattle herds and require large areas for grazing purposes. Where the white settler has come in there has been a delimination of reserves, often ample at the time. As, however, the tribes increase in numbers, or the white man extends his operations, there is often considerable friction. Cattle-owning peoples are to be found in Bechuanaland, in the reserves of Northern and Southern Rhodesia, in Basutoland and in the reserves in Cape Colony and Natal. The people on reserves differ from the nomadic tribes in that they do not move from place to place and therefore cultivate a certain amount of ground for cereals. Their exchange staples are hides and skins and surplus mealies.

The collection of forest produce is an important economic feature of Southern Nigeria. The rivers are bordered by thick forests, the people cannot be nomads, and in parts cannot even keep cattle owing to the fly, so that desiring flesh food they are sometimes cannibals. The wild palm-fruit out of which the palm-oil and the palm kernels are obtained, form a great staple of exchange, not merely in Nigeria but also in Sierra Leone and the Gold Coast. Rubber was

formerly collected from the forest in West Africa, until it was ousted by plantation rubber. Kola nuts are another great staple of the forest collectors in West Africa. Another group of peoples within the Empire who rely on wild produce are to be found in the Pacific, where copra from coconuts forms the great exchange staple of many of the islands.

Among peoples who produce their own food supply, like the rice-growers of Burma and North Borneo, there is often a surplus of these cereals for exchange. This tends to develop into a crop cultivated for exchange as happened with rice in Burma. Some parts of the Empire, however, definitely cultivate a crop for exchange and rely upon supplying their wants from the sale of their staple product. This is true of the negro in the West Indies who grows sugar or bananas. The most striking development is the recent growth of cotton in Uganda and cocoa on the Gold Coast, both twentieth century developments. Large parts of the Sudan and Northern Nigeria are in process of changing from the primitive economics of nomadic herding to a system of exchange cultivation based on cotton. On the Gold Coast an agricultural revolution involving a change from communal to individual land holding is proceeding with some rapidity in consequence of cocoa growing. Gambia now cultivates ground nuts for conversion into salad oil at Marseilles, and is also a colony of exchange cultures.

Although cocoa on the Gold Coast and cotton in Uganda, ground nuts in Gambia and Nigeria, are grown for an outside market, the method of cultivation differs fundamentally from that of the plantation colonies in that it is carried out on a small scale by natives providing in themselves and their families the sole labour supply.[1] This type of peasant cultivation necessitates a great deal of government assistance and supervision. " To obtain success in educating the native to join in the commerical development of the Empire we must proceed slowly as in the education of a child. He must be taught things in the simplest way, guided through difficulties and guarded against mistakes and loss." Such is the attitude of British officials towards these primitives.[2]

Such portions of the former German colonies of Tanganyika and the Cameroons as have been allotted to

[1] A large part of the ground nuts in Gambia is grown by migrant labourers from the French colonies. They number about 20,000 annually.

[2] Tolland, " Tanganyika Territory ": *United Empire*, July, 1923, p. 443.

Great Britain are being rapidly transformed from plantation colonies to colonies of native cultivation.

In Tanganyika the first step in that direction, which is to revive the authority of the native chiefs and to work through them, has already been taken. The native officials set up by the Germans, who were often unrelated to the people over whom they were placed, are gradually being dispossessed in favour of the tribal organization. Opportunity was taken of the sales of ex-enemy property to restore to the tribes some of the lands taken from them, and although the Government is not hostile to planters, attempts are being made to train the natives to grow cotton as in Uganda, the prospects for which are good.[1]

In the Cameroons the Northern regions are being assimilated to the system in Northern Nigeria, and the Southern Cameroons to that of the adjacent Southern Nigeria. This means native administration, the preservation of native customs and a slow transformation of the economic life without pressure or demoralization.[2] There are large cocoa plantations inherited from the Germans at the base of the mountains.

The peoples of the Native and Plantation colonies are

[1] In the area given under mandate to Great Britain there were in April, 1921, 4,107,000 natives, the Belgians taking over 3,493,000 in the ex-German territory mandated to them. In addition in the British region there were 9,411 British Indians, 798 Goanese, and 4,782 Arabs. Tolland, "Tanganyika Territory": *United Empire*, July, 1923, pp. 439–41. "The policy which is being followed is to develop the people so far as is possible on their own lines and in accordance with their own ideas and customs."

[2] "On the arrival of the Germans they appear to have made no use of the indigenous machinery of justice but to have destroyed it as far as was possible. For the native system they substituted direct appeal to the Administration itself, thus nullifying the powers of the chiefs and elders, destroying the native system of government and setting up in its place the direct rule of individual Europeans, perforce ignorant of the local languages, unversed in native law and custom and all too few in numbers to cope with the work though enough to break down the native system and to dishearten the true elders amongst the people.

". . .. Thus the inauguration of Native Administration on the lines indicated involves the resuscitation of the indigenous form of government, the consolidation of tribal units, the selection of the rightful tribal or clan chief . . . or in other cases the re-establishment of the clan council together with the definition of the jurisdiction and powers of the chief or council and their responsibility to the Divisional officer; the latter then acts as the adviser of such chiefs or councils educating and controlling them, keeping his finger on the pulses of native life and guiding the people through their own channels into the paths of progress so that they may be in a better position to resist the process of denationalization and demoralization which inevitably sets in when an unorganized native society is brought into close contact with the modern world."—*Report on the British Sphere of the Cameroons for* 1922, p. 49.

even more varied than those of the colonies of Western civilization.

While there has been no importation of foreign labour in West Africa in the nineteenth century, a large Mahommedan and Arab element has penetrated since the seventh century into both Nigeria and East Africa as conquerors and settlers. The Arabs have modified the racial type and have introduced a considerable instinct for trade. The peoples in West Africa alone vary so enormously that there is no more racial affinity between them than there is between Scotchmen and Italians. In Nigeria, for instance, the more warlike tribes occupied the plains with their animals and drove out weaklier pagans to the hill tops. In the single mountainous province of Bauchi it has been estimated that no fewer than sixty-four languages are spoken.[1]

The East Coast of Africa differs from the West in that the negro tribes have been supplemented by a considerable migration of Indians. It resembles the West in the presence of a considerable Arab element previously engaged in the slave trade.

Thus, within the British tropical Empire are to be found in Africa a vast collection of negro tribes to which Arab conquerors have been added both in the East and West, and to these, again, have come in some Indian settlers on the East coast. Beyond the seas in the West Indies are to be found more negroes, descendants of the slaves to whom imported Indians and some Chinese have been added. In Malaya in addition to the indigenous inhabitants and their rulers are to be found Indians, Javanese, and Chinese. On top of all these peoples in all stages of development are to be found the missionaries, the white planters, the mining, railway, and other engineers, the traders and the Government officials, including the doctors and the scientists.

[1] Lugard, *The Dual Mandate*, p. 75.

BOOK ONE

SYNOPSIS OF PART THREE

The Old and the New Colonial Systems

I. *The Old Colonial System*, 1598–1763, *i.e. from the acquisition of Newfoundland to Canada.*

(*a*) Causes of the expansion—Seventeenth Century: The ideal of a self-sufficing Empire. Tobacco, timber, fish, spices. The employment of shipping. Eighteenth century: Raw materials and markets.

Causes of emigration—religious and political dissent, profits.

(*b*) Mechanism of development:—

(i) Chartered companies for trade.

(ii) Chartered companies for colonization.

(*c*) Policy of mother country contained in Navigation Acts.

(*d*) West Africa as the point of contact of the trade of East and West.

(*e*) The Indian trade and rivalry of the Dutch.

II. *The new Colonial Empire*, 1763–1914.

(*a*) New Regions. The development of continental interiors: New Brunswick 1784, Ontario as separate province 1791. Australia 1788. Cape Colony 1795–1815. The decline in the importance of the West Indies.

(*b*) New Island and coastal stepping-stones from the Mediterranean to the Pacific: Gibraltar 1784, Malta 1800, Cyprus 1878, Aden 1839, Socotra 1886. To guard the Suez Canal Egypt occupied 1882, Somaliland 1884, Sudan 1896–99. Ceylon 1795, Penang 1786, Malacca 1824, Singapore 1819, Hong-Kong 1841, Kowloon 1860, British Columbia 1858.

(*c*) Pacific line of stepping-stones southwards: Sarawak 1842, Labuan 1846, British North Borneo 1881, Fiji 1874, Papua 1884, 1891–1901 smaller groups of islands.

(*d*) African line of stepping-stones: Sierra Leone 1788, Gambia 1816, Lagos 1861, separate colony 1886, Mauritius 1810, East Africa 1888, Zanzibar 1890, Nyasaland 1891.

III. *Change in Commodities.*

Spices and sugar no longer occupy the centre of the stage. Bullion produced within the Empire. Slave trade by sea extinguished.

Importance of colonial trade centres in wool, wheat, meat, butter, tea, coffee, cocoa, rubber, palm-oil, ground nuts, coco-nuts, jute, rice.

New British exports: cotton piece goods, engineering products. Old ones: woollen goods.

IV. *Causes of Emigration.*

Poverty after Napoleonic wars—industrial revolution and its disarrangements—enclosures—over-population, especially Irish—skilled mechanics to erect public works—convicts.

The colonization company again an important mechanism of transferring population.

Land sales and subsidized passages to Australia.

V. *The financing of colonies in the nineteenth century and the free trade policy.*

VI. *Motives of Expansion.*

(*a*) Markets and raw materials—the effect of the protectionist tariff system of Europe and the United States after 1878.

The new rivalry of Germany.

(*b*) The desire to suppress slavery and the responsibility for the welfare of native races—Missionaries.

(*c*) Rivalry of France—the French policy of high tariffs against foreigners.

VII. *The modern English method of colonial expansion is by building roads and railroads.*

PART THREE

THE OLD AND THE NEW COLONIAL SYSTEMS

(1) The Old Colonial System, 1598–1763

IN order to grasp the significance of the new colonial Empire one must realize how radically it differed from the old. Not merely were the territories new, but there were new objects of trade which gave a new value to colonies. The people who emigrated were of a new type, and the attitude of the Government was wholly new both in its trade and its development policy. The attitude towards coloured races was also wholly new. And yet, although the nineteenth century Empire is a new Empire with new problems necessitating new policies, it was built up and developed from old foundations. The Outposts of the old colonial Empire were the stepping-stones over which Great Britain passed to build up the great continental and island Empire of the last century and a half.

The old Empire had consisted of such trading posts as Surat, Bombay, Fort St. George (Madras), Fort William (Calcutta), and a fort on the Gambia, a few islands in the West Indies, and a settled coast-line in North America. The thirteen North American colonies, Newfoundland, and the West Indies constituted the areas of racial expansion. In West Africa and India the expansion was of the factory[1] or trading type.

The causes of the racial and trading effort overseas during the seventeenth century are to be found in the answer to two questions. Why did the Government let its people go? And why did people want to go? These questions are really quite distinct. In France the Government was willing to let its people emigrate and was only too anxious that they should push French trade in Africa or India. But, although great adventurers, soldiers, and explorers were forthcoming,

[1] i.e. a place where the trading factors congregated, not a place where things were manufactured.

the actual settlers did not want to go, the mercantile community would not, or perhaps for lack of capital could not, give sustained support to the French chartered companies for India, Africa, and the Levant, and the absence of popular support and sustained mercantile effort proved the weakness and the undoing of French colonial expansion as a whole.

A leading characteristic of English colonization in the seventeenth century was the fact that it owed little or nothing to the State—a sharp contrast with the colonial Empires of Portugal, Spain, Holland, and France, which were all more or less state founded and state supported. It is true that the expansion of the English race could not have taken place had not the Government of the seventeenth century been willing to permit emigration. England was a sparsely populated country containing probably $3\frac{1}{2}$–4 million people at the beginning of the reign of James I. There was a perennial shortage of labour, population increased very slowly indeed, and to encourage or tolerate a drain of the youth and capital of the country to such far distant regions as America was by no means an uncriticized policy in England itself. From the very beginning, however, England showed that toleration of other beliefs which has been one of the marked features of her colonial expansion, and this explains why so many people were willing to emigrate, as this toleration did not exist in England, itself under the régime of the Act of Uniformity and Test Act.

Whereas other countries, such as Spain and France, carefully limited the people they allowed to leave the country, England did not hinder the emigration of any religious or political dissenter. France, on the contrary, would not sanction the settling of Huguenots in Canada, nor would Spain allow any but faithful adherents of the Roman Catholic Church to settle in her American possessions. The English racial expansion on the contrary consisted of Puritans, Catholics, Jews, Quakers, Anabaptists, and many other dissenters as well as orthodox members of the Church of England. Supporters of the King and supporters of Cromwell, people who would not subscribe to the Test Act as well as younger sons of country gentlemen whose natural destiny was trade had they remained in England, all formed part of the population which created a British type in the New World. Irish Catholics and Ulster Protestants, Huguenots, Palatinates, and other Germans were also granted asylum.

While one of the causes which induced people to take part in the creation of the first Empire is to be found in the fact that political or religious dissenters who could not conscientiously fit into the system at home were freely allowed to settle in the colonies, the other great cause lies in the economic gains to be made out of such expansion.

To the men of the sixteenth century colonization often appeared as a sort of crusade against the great Catholic Power that threatened the small Protestant peoples of the North. But the attacks on the Spanish treasure fleets were often quite profitable ventures. The money brought home by Drake supplied Queen Elizabeth with capital to invest in the Levant Company, and the profits made by members of that Company were invested in the East India Company and led to the inauguration of trade with the East. The profits of that Company were again invested in the Virginia Company, and thus helped to finance the racial expansion in North America. The seventeenth century overseas expansion was carried out by merchant companies. Their members, who consisted of country gentlemen as well as merchants, saw clearly that profit might be made out of the commodities of the East and the West. The "plump Hollanders" were credited with untold wealth derived from spices, sugar, and tobacco. They also monopolized the fishing trade round the English coast, and had in their salted and cured fish an article in universal demand in Europe for the Catholic fast days. Why should the English be outdone in wealth, shipping, and prestige by the Seven United Provinces they had helped to preserve from Spanish oppression? So they followed in the Dutch footsteps to the East.

The English Government was willing to let its people go because in the first place it wished to limit the power of Spain. In 1580 Spain acquired Portugal, and added the Portuguese Indian Empire with the great spice trade to the gold and silver mines of the New World. The West Indian Islands were outposts from which the treasure ships of Spain might be attacked, and the expansion of Spain to the North was limited by the English settlements. They were, as pamphleteers observed, "a hook in the nostrils of Spain," "a bit and bridle in the mouth of Spain."

The Government also saw in the colonial expansion of the seventeenth century the chance to found a self-sufficing economic Empire. Tobacco England obtained

largely from the Spanish possessions of Cuba, sugar was supplied by the hated Dutch. To develop tobacco in Virginia was to render this country independent of Spain in one important respect, and to grow sugar in the English islands was to secure another important colonial product in great demand, to say nothing of being independent of the Dutch in this respect.

Dutch rivalry stimulated a new interest in the fisheries of Newfoundland, and an English company was formed to develop the trade in salted and dried cod, which might help to further English trade with the Mediterranean. Timber was an indispensable article for ship-building. The English timber was getting used up as it was needed for fuel, for houses, for iron smelting, and glass making. Above all there was a great shortage of trees suitable for masts. It was hoped that England might develop masts, pitch, hemp, and tar in America, and so render herself independent of the Norwegian and Swedish supplies. Although an English company, the Eastland Company, based its claim to assistance and government support on the ground that it imported such an indispensable commodity as timber, the bulk of it was brought into England in Dutch vessels, in the latter half of the seventeenth century.

At the beginning of the sixteenth century English ships fluctuated between Lisbon, Bordeaux, and Antwerp. Only voyages of adventure penetrated further South and North. During the sixteenth century merchant companies had been formed for foreign trade and by 1600 English shipping ranged from Archangel to Constantinople, but had scarcely penetrated outside Europe except on voyages of exploration, i.e. there was no regular English trade beyond Europe. The ships were of a small handy size for short-distance voyages. The object of encouraging settlement in America or voyages to India was to provide long-distance voyages and give encouragement to the building of a larger type of ship. The Government also desired that the sugar, spices, colonial products, and fish should not merely satisfy the wants of Englishmen, but that they should prove the basis of an entrepot or distributing trade. "We shall rear merchant ships both fair and tall," said a writer, "so that nothing that swimmeth shall make them vail nor stoop, which shall make this little northern corner of the world the richest storehouse for merchandise in all Christendom."

Thus, a leading cause of seventeenth century expansion was the desire to obtain tobacco, sugar, timber, and fish. From the East Indies the adventurers drew spices, cotton cloth, indigo, and saltpetre for gunpowder. To obtain these commodities "adventurers" undertook the risks, and the Government was willing to support them by such legislation as would help to develop a self-sufficing Empire. It was especially anxious to get new fields of employment for the mercantile marine which was the foundation of British defence in war time.

In the eighteenth century the objectives of traders altered considerably. An eighteenth century trader would have instanced raw materials for the growing industries and markets for English manufactures as the principal reasons for acquiring or holding colonies. While the older commodities were still very important, they were reinforced in the eighteenth century by tea, coffee, cocoa, and by the growing importance of the slave trade.

The mechanism of the trading and colonial development of the seventeenth and eighteenth centuries was that of chartered companies. They provided that mercantile knowledge, that mobilization of capital and sustained effort that made British colonization eventually the predominant type.

The British Government was too poor to subsidize these companies. The Royal African Company was the only one that got monetary assistance from the British Parliament, and then not till 1730. So far from assisting the companies, the British Government expected to borrow from them, and did so frequently. The French companies had their deficits made up by the Crown, and the Crown in consequence determined their policy and was not always consistent in its support. If the English companies gained it was their own affair, if they lost it was also their own affair. They had to stand on their own feet, and this sharpened their commercial wits. As a corporation never dies, they had a continuity of existence which made them a more important factor in trade and colonization than individuals or "lords proprietors".

Although the chartered companies were of two types, they had this in common—they all held a monopoly of the trade of their region. One group consisted of chartered companies for commerce like the East India, African, and Hudson's Bay Companies. Eventually these three became territorial powers, but this was

not the intention of their promoters at the outset. They were, as a matter of fact, anxious to avoid such a complication, but the necessity of keeping their trade safe from other rivals drove them to acquire forts and land.

The other companies were chartered companies for racial expansion. They, too, intended to make profit out of trade, but to do that in a country sparsely inhabited by savages a population has to be introduced, and so the Virginia, New England, Somers Island, Laconia, Guiana, and many other companies were formed. They also hoped to make their profit out of land sales as well as out of the monopoly of trade. Their life was short compared with that of the great trading companies as the population they introduced soon " took hold " themselves, and resented the government of the company.

The mother country considered that in virtue of its right to prohibit emigration it had the right to control the economic development of colonists if it permitted them to leave. In return she was willing to provide that defence against Spaniards, Dutch, and Frenchmen without which the colonists could not hope to survive. If they had been forced into the system of either of these other powers, not merely would their trade have been rigidly monopolized but political and religious freedom would have been non-existent. The English system with all its limitations was the most liberal of its kind.

But it would be quite contrary to the very objects with which the Empire was founded were the bulk of the trade of the colonies to fall into the hands of the Dutch. If their existence merely increased the shipping and power of these " eternal prowlers for gain ", the merchants of the United Provinces, the whole object of the colonial system would be vitiated. Hence, navigation Proclamations, Navigation Acts, Acts of Trade, Customs regulations and clauses in the charters of colonial companies formed an elaborate code of law and regulation designed to secure that English and later colonial ships should be used in the inter-imperial trade, that no foreigner should trade with the colonies, and that certain " enumerated commodities " of which tobacco, sugar, logwood, and naval stores were the chief items, should be brought to England only. The colonies had, moreover, to purchase their manufactures from England, and competing industries were suppressed

if they clashed with English exports. In return there were considerable preferences on colonial goods in England, bounties were given on the production of naval stores and other raw materials, colonial shipping was placed on the same footing as English, and received the same encouragement. Not merely did England undertake their defence, but the colonists were allowed, as they never would have been allowed under the great Roman Catholic powers, to develop their own individuality, their own political life, and their own form of religious worship.

While the racial expansion in the New World and the production of " colonial products " were the characteristics of British expansion in one region of the world, the African expansion was a second region where the English gained a footing, partly to obtain slaves and partly in connexion with the Indian trade.

While New England was settled in small agricultural areas of a self-supporting type, the South, comprising Virginia, Maryland, the Carolinas, and Georgia, were settled in large plantations, the principal product of which was tobacco. The West Indies also grew sugar. This type of cultivation required field labour, and the importation of negro slaves from West Africa was begun in consequence. Several African companies were successively formed in the seventeenth century to carry on this lucrative trade. The Royal African Company, founded in the reign of Charles II, had the longest career of any of them, though it was hampered by the climate and the rivalry of the French and the Dutch, both of whom competed for the traffic and its profits.

Nor did the slave trade shock public sentiment in the seventeenth and early eighteenth centuries. The bulk of the European population were serfs, and could not move from the soil, and the idea that a man had a right to his own person was not generally acknowledged till after the French Revolution. Slavery was part of the social system in Africa, and the negroes exported to America would equally have been slaves had they remained in Africa. If a man or tribe were weak enough to be conquered they were enslaved for African, if not for American service. The Europeans did not create the slave trade, it was indigenous and they regarded themselves as benefactors for taking the negroes out of heathen darkness into the light of Christian influences. Slaves

being worth at least £20 a piece, and often much more when they arrived in the West Indies, would not be wilfully done to death if the captain or owner could avoid it. The standard of sanitation, food, and comfort on all vessels was appallingly low for white sailors.[1] Scurvy and ship's typhus took horrible toll on the long voyages, and the causes of these diseases and possibility of prevention were not known till the end of the eighteenth century, when lemons prevented the one and cleanliness eliminated the lice which conveyed the other.

The eighteenth century regarded the slave trade as one that encouraged shipping, provided an outlet for English cloth or Indian cotton goods in West Africa, as the slaves were paid for in those commodities. The surplus was paid in gold and reinforced the British coinage by "Guineas". The sale of the slaves in Spanish America provided the indispensable silver for the trade with India. Strong, docile labour was also provided for the British plantations in the shape of negro slaves. Their transport gave employment to shipping, and negro labour had the additional advantage that it was too unintelligent to be used in manufacturing. The plantation colonies would, therefore, be enabled with this labour to provide a valuable tropical commodity like sugar or tobacco for England to use and distribute, and would prove an excellent market for English manufactures in return. Even the New England Puritans engaged in the slave trade. The Northern colonists, unlike the Southerners with their large plantations, had settled on small farms of a size which might be cultivated by an average family. They required little extra labour and grew maize and pork, any surplus from which was sold to the West Indies, which did not produce their own food supply. In return the Northerners purchased rum with which they bought slaves in Africa, made their profit on the resale of these slaves to the Spanish colonies or Virginia, and with the proceeds they bought their manufactures in England. The slave trade was in fact one of the plums of commerce—spices and colonial products were the others. One of the very few tangible gains England was held to

[1] A petition to the East India Company in the seventeenth century was signed by a thousand of its seamen's widows, which shows the mortality on the voyages to India. *Petition of Margaret Walker*, Brit. Museum, 8223 *e*, 1 (47). Of 1,500 men who went yearly to India, about the year 1590 in Portuguese ships, it is recorded that the number returning was rarely as large as 100. Moreland, *From Akbar to Aurungzeb*, p. 10, n.

have obtained out of the war of the Spanish Succession was the right to supply Spanish America with slaves annually under the Asiento contract of 1713.

West Africa was, however, not merely the great depot for coloured labour, but also a refitting station on the voyage to India. Ships on a long four to six months' voyage needed somewhere to water and clean the seaweed and barnacles off the bottoms, and all nations trading with India had an African station. England had obtained St. Helena in 1651, and this served her purpose, the Dutch had settled at Cape Town in 1652, the Portuguese had established themselves on both sides of Africa, and the French held Mauritius, or the Ile de France as it was then termed, with one of the best ports in the Pacific, Port Louis. Apart from slaves, Africa as a whole provided no attractive commodities; it was merely an obstacle, needing a long detour to the South, on the way to the cherished spices of the Indies. As soon as Portugal fell to Spain in 1580 and the Dutch as rebellious Spanish subjects were cut off from the great spice distributing trade which they had driven from Lisbon, they pushed their way out to the source of spices—the islands of the Malay Archipelago—and the English followed in their wake.

The third great region of British expansion under the old colonial system was comprised in the term of "the Indies". These included the "Spice Islands", the trade with the Malay Peninsula, India, and the trade with Persia.

The strategic point of the trade was the Indian Peninsula not because it provided spices, it only provided pepper and itself imported spices, but because it provided the cotton goods with which spices were purchased in the islands. The whole difficulty of trading with the East lay in the fact that Europe had so little to send out that the East wanted—a few luxury articles for the Courts, lead, copper, quicksilver, and tin, coral, gold, and ivory, were the only commodities except silver that India would absorb. Therefore, it was mainly silver that was taken out, and British trade had to be organized so as to obtain silver wherewith to buy cotton goods to exchange for spices. As the Dutch obtained what almost amounted to a monopoly in the Spice Islands, the English only retaining the little port of Bencoolen, they were driven more and more to work up other commodities in India itself. They, therefore, were the first

to bring cotton piece goods to Europe. They also developed the export of saltpetre and indigo. They were able to obtain spices from the surplus of Indian imports. The voyages undertaken by the company's servants to Persia, to which country they exported spices and cotton goods, helped to provide some of the silver required for India. They took cotton goods to West Africa, and from here obtained some of the gold and ivory so important for the luxury demand of India. The English trade with India was really a chase to find something that India would be willing to take, and the silver obtained by the sale of the slaves in the West Indies and Spanish America was all important in this connexion. It was also a problem to find Indian commodities for sale in Europe other than spices. After all, the absorbable capacity of Europeans for spices was limited, the Dutch supplied the larger quantity and Europeans began to require less of these pungent flavourings as sugar came more and more into use.

The English East India Company was hampered by the fact that it had at first to share out the capital and profit after each voyage. If the voyage was successful there was no difficulty in getting fresh capital, if it were a failure or the results poor the subscriptions for the following voyage were slow in forthcoming and the venture was on a limited scale. Even when the capital was allowed after 1612 to extend over several voyages before the share-out took place, there was no certainty or continuity in the trade.

The English factors who were left behind to collect goods could never reckon on the amount of capital they had to spend, and whether the next subscription might not mean a considerable curtailment of operations. Each joint stock enterprise was afraid to launch out in buildings and equipment lest their successors, the next joint stock, might not be willing to purchase them or might try to get them at a low valuation. The Dutch Company, which disposed of a far larger capital and which was a semi-state venture with a continuous existence, had a much stronger position.

After various vicissitudes and a period when the trade with India threatened to lapse altogether, a " continuous joint stock " was formed in 1657 which meant that interest was paid on a capital that was permanent and not shared up every three or four years. The head English factory was established at Surat on the West coast

near the Gujerat cotton supplies, but a settlement was also made on the Coromandel coast at Fort St. George (Madras) in spite of the fact that it was exposed to the monsoon and was very unsafe in consequence for shipping. But it was the centre of the cotton trade. On all this coast the English encountered the opposition of the Dutch. Some factories were also established on the Hooghly after 1650, and Fort St. William, afterwards to be called Calcutta, was built in 1690. Bombay, a swampy insanitary island, part of Catherine of Braganza's dowry, was handed over by Charles II to the East India Company in 1662, who made it their chief depot instead of Surat.

Up to the end of the seventeenth century there was little trace of the future Indian Empire in these outlying trading posts. Nor was the trade an exceptionally profitable one—the average rate of interest paid on the continuous joint stock after 1657 did not amount to more than 10 per cent, which was not high in the days when the Government of England borrowed from the Bank of England at the rate of 8 per cent.

The sixteenth century witnessed a struggle between the English and the Spaniards, the seventeenth between the English and the Dutch, and the eighteenth century witnessed a new struggle for colonial possessions between England and France. In that century it was decided which of these two powers was going to control the American, African, and Asiatic expansion of Europe.

Both England and France had become in the eighteenth century great industrial nations. Both of them required raw cotton, raw silk, raw wool, and dyes for their growing industry. Thus, the centre of gravity of the economic importance of colonies was altered in the eighteenth century. Both nations struggled for colonies because they wanted markets and raw materials under their own control, not merely because they wanted spices and sugar. The century saw the rapid expansion of the French in India and Louisiana, and the growing prosperity of the French Antilles, while a great effort was made by the French in West Africa to control the slave trade.[1] Industry, commerce, colonies, and wars became inextricably intermixed in the century-long duel. England joined in the wars

[1] Two-thirds of the French external trade was said to be with the French colonies before the French Revolution. Girault, *Colonial Tariff Policy of France* (translated), p. 10.

of the Spanish succession to keep France out of the Spanish possessions in the New World, which the King of France would have obtained had he become also King of Spain. This would have stopped the English trade, licit and illicit, with Spanish America. She fought the Seven Years' War partly to prevent her colonists being hemmed in by the French expansion extending down from Canada to New Orleans. As all nations excluded other nations from their colonial trade to lose a colony or settlement was to lose its trade, and so when the Moghul Empire collapsed, and the French under Dupleix began to acquire the ascendancy in India, the English Company had no choice but to resist that ascendancy if they wished to retain the trade. After the battles of Plassey and Wandiwash the company began to evolve as a territorial and not merely as a trading power in India, and this became clear when they obtained the right to collect the revenue of Bengal in 1765. The French, on the other hand, lost their Indian possessions, as they lost their American, to England. Nor was this the only outcome of the eighteenth century struggle. In 1713 the French had been obliged to acquiesce in the claims of the Hudson's Bay Company to the fur trade of the great North-West territories, and yielded at the same time the maritime region then known as Nova Scotia. France lost another great point of racial expansion when she had to cede Quebec and the St. Laurence in 1763.

(2) The New Colonial Empire

The acquisition of Canada marks the beginning of a new colonial era. The period of "tide water colonies" was over once the English settled in Ontario in 1783 and the Australian colonists found their way in 1813 through the mountain barrier in New South Wales confining them to the coast. It was also the virtual end of the French colonial rivalry until it was revived in the period after 1870. The period between 1763 and 1870 is the period when British expansion was unhampered. For the first time there was no need to struggle to get and keep a footing as against other nations.

So little was the importance of continental regions appreciated in 1763 that a furious controversy raged in England

as to whether she should retain Canada or Guadeloupe and Martinique at the peace, tropical islands being regarded as more profitable than continental colonies. The retention of Canada—a continental area in the temperate zone—marked the beginning of a new attitude towards racial expansion.

It was argued that once the fear of the French was removed by the taking of Canada, the American colonies would not long remain loyal to England. Events soon proved the truth of this view. With the freedom allowed them by England, the American colonies had developed a vigorous economic and political life of their own. It had always been part of England's policy of toleration to permit the existence of colonial legislative assemblies. The colonists had in consequence developed a nascent nationality and resented the overlordship of England, whether expressed in Navigation Acts or Stamp Acts. They wanted to lead their own life in their own way without dictation, let, or hindrance from any other power. The French in revenge for their own losses supported the rebels of England's continental colonies, to which a large amount of their success was due.[1] England, occupied as she was with fighting France, Spain, and Holland in Europe, could only spare indifferent troops and little attention for outlying strips of the world. The northern and New England colonies had always been unpopular in England and at that time she never valued continental colonies as much as islands owing to the inferior accessibility of the land areas. The cherished parts of the old colonial system were the East and West Indies. These regions were excellent markets, they produced great tropical staples for the distributing trade, and they did not compete with England.

England still retained in 1763 some of the West Indian islands acquired in the seventeenth century, viz. Barbados (1605), Bermuda (1609), the Bahamas (1629), Jamaica (1655), the Leeward Islands (1632–73), to which she added the Windward Islands between 1763 and 1783 and Trinidad and Tobago between 1763 and 1797. With the exception of these, Newfoundland, Nova Scotia, St. Helena, some trading posts in West Africa, and India, the vast Empire of the nineteenth century has been acquired since 1763. It is therefore almost wholly new, and has been founded to a great extent on previous Portuguese, Dutch, and French expansion.

[1] Doniol, *Histoire de la participation de la France à l'établissement des Etats Unis.*

The newly acquired province of Quebec was a French Catholic region still in the feudal stage of serfs and seigneurs settled along the banks of the St. Lawrence. It was forest country, and every fresh settlement had to be hacked out with the axe, so that pioneering was a slow process. The great impetus to its further development came in 1783, when the United Empire Loyalists, finding it impossible to remain under the rebel flag of the United States, migrated to British territory. A new province had then to be carved out of Nova Scotia—New Brunswick. Ontario also owed the beginnings of its existence to the Loyalists. As England had lost her dumping ground for convicts in the United States, she began to turn her eyes to New South Wales, and a new racial expansion began at the same time in the extreme north and extreme south. The settlement of Australia was accelerated by the fact that the French were exploring in that region, and it was feared that they might try to obtain a compensation for their losses in India by some great southern settlement, which might threaten the British expansion and trade in the East.

The leading characteristic of the century and a half between 1763 and 1914 was continental inland expansion in both the Tropics and the Temperate regions. Yet the old colonial system proved the jumping-off ground of the new. Newfoundland and Nova Scotia were the gates of the settlement of Eastern Canada; out of the great desolate fur-bearing territories of the Hudson's Bay Company were to be carved in 1858 the flourishing maritime colony of British Columbia and after 1886 three great grain-growing prairie provinces. The little forts on the West Coast of Africa, retained to suppress the slave trade, became the starting-points of a great inland expansion into Ashanti and the Northern territories, while Lagos, acquired in 1861 to put down the slave trade on the Oil Rivers, led to the expansion into Southern and Northern Nigeria by which 367,928 square miles were added to the Empire—a region more than three times the size of the United Kingdom. In India itself, partly owing to the rivalry of the French, and partly owing to the necessity for keeping order, the great extension of British rule began after Napoleon's threat to India. When Wellesley left India in 1805, the trading outposts of 1757 had become a considerable Empire, including Bengal, North-West Provinces, Mysore, the Carnatic, Surat, and Tanjore. During the

century the British dominion in India continued to grow. Assam was absorbed in 1826, Sind in 1843, the Punjab in 1849, Lower Burma by 1852, Jansi and Nagpur in 1853, and Oudh in 1856, to which Upper Burma was added in 1886. Singapore, acquired in 1819, again proved another point of continental expansion in the Malay Peninsula, broadening out from the Straits Settlements into the Federated and Protected Malay States when the forward policy was adopted after 1874.

The two new points of continental expansion which owed practically nothing to the pioneers of the old colonial Empire were South Africa and Australia. But, as we have seen, the very loss of the United States as a convict settlement turned men's eyes to the Southern continent as a substitute. Cape Town again owed its acquisition to the fact that the East India Company had established itself in India, and that it was a good port of call on the way to India. Thus the South African expansion is indirectly bound up with the Indian trade. That the port should expand first of all into Cape Colony and then into four provinces and finally into the Union of South Africa, with the great tropical colony of Rhodesia to the North, was but part of the continental expansion that is a characteristic of the new Empire.

During the whole of the past century it has been a question of the development of interiors—the moving inland from a port or coast-line to control the land behind, and then the continuous pushing back of the frontier, a process enormously quickened by railways in the last half century.

Not merely does the new Empire consist of continents, but the past century witnessed the acquisition of a new island realm. The West Indian islands, once the most cherished and richest part of the old colonial system, lost their importance at the beginning of the nineteenth century. They had been the great slave depots for Virginia and Spanish America, and this trade was cut off with the prohibition of the overseas slave trade in 1807. The islands had also been important intermediary stations for the smuggling trade with Spanish America. When the Spanish colonies asserted their freedom in the first quarter of the nineteenth century, trade was carried on direct between England, the United States, and Spanish America, and the islands lost an important entrepot business. They further suffered great losses when their slaves were freed in 1833. Inadequate compensation was given for the slaves and the labour supply became

unreliable as the freed negro showed no desire for steady regular wage work. To crown their misfortunes came the development of sugar from beetroot and its large production, aided by bounties given by continental governments, depressed the price of cane sugar. Not till the twentieth century did they begin to recover some of their former prosperity with scientific agriculture, new cultures and new trading connexions with Canada. They have also acquired a new strategic importance with the opening of the Panama Canal.

After 1763 three lines of islands or coastal stepping-stones were added to the West Indian group. The first consisted of a line of islands stretching through the Mediterranean and Indian Ocean. These were linked together by the opening of the Suez Canal in 1869, which necessitated the safeguarding of that route by the acquisition of fresh coastal territory on either side of it to guard the entrance and exit.

Gibraltar had been British since 1784, Malta was acquired in 1800, the Ionian islands, captured between 1810 and 1813, were given to Greece in 1863. Another link in the island chain was, however, provided when Cyprus became British in 1878. Aden was added in 1839, Socotra in 1876, Ceylon was taken from the Dutch in 1795, and was retained, although Java, Surinam, and Sumatra were given back to Holland between 1814 and 1816. Malacca was also restored, but was re-obtained in 1824 in exchange for Bencoolen. Meanwhile, the Governor of Java, Sir Stamford Raffles, bought Singapore in 1819 for the East India Company from the ruler of Johore. This island was made a free port, and with its magnificent roadstead for ships proved to be an important outpost for trade to the Far East, especially after the development of steamships. Hong-Kong, added in 1841, soon became a depot for the export of Chinese labour, a shipping trade centred round the island and it soon became the outpost of the trade of Southern China and the great nodal point of the Pacific trade. Kowloon, on the mainland opposite, was added in 1860. After the opening of the Suez Canal fresh territory was acquired to safeguard that important route. Egypt was occupied in 1882, Somaliland in 1884, and with Aden on the opposite shore, both ends of the Canal were brought under British control. To these the Sudan was added between 1896 and 1899. Since the Peace of 1918, Britain has occupied Palestine under a Mandate, and this provides a further

insurance for the safety of the great highway to India should Egypt become hostile, while the new sphere of British control in Arabia illustrates the tendency to inland penetration once the coast-line is secured. In the same way the alternative route by the Bagdad railway and the Persian Gulf is safeguarded by the British occupation of Iraq.

Both Singapore and Hong-Kong acquired a new importance with the development of the steamship, while British Columbia, which became a Crown Colony in 1858, gained a new importance with the growth of the Pacific trade. The completion of the Canadian Pacific Railway in 1886 made Canada the Imperial link between the Pacific and the Atlantic, and still further brought the Pacific and its islands into prominence by providing an alternative route to England.[1]

A second series of ocean stepping-stones was acquired as part of the new Pacific development, and connected up the new inland expansion in the Malay Peninsula with the new southern expansion in Australasia. Sarawak, acquired by Mr., afterwards Rajah, Brooke in 1842, placed its foreign policy under the control of Great Britain in 1888, and to this extent became a Protectorate. Labuan was acquired in 1846 as a base from which to put down the rampant piracy in the islands which menaced the safety of shipping. Further territory in Borneo was acquired by the British North Borneo Company from the Sultan of Brunei in 1881, and the remainder of his territory has since come under British control and is administered by a Resident attached to Singapore under whom Labuan is also placed.

Fiji was added in 1874, and British New Guinea in 1884 at the urgent request of the Australians in order to insure the defence of that continent. The Commonwealth itself took over British New Guinea in 1901 and renamed it Papua. To these great areas a host of small islands and island groups, forming an inner and outer ring of defence for Australasia, have been added between 1891 and 1901, such as the Ellice, Solomon, Tonga, and Gilbert groups of islands. These places have now gained a new importance for defence with the coming of the submarine and for trade with the

[1] Wei-hei-wei and the island of Liu Kung was another link in the Pacific chain leased by China to England in 1898, but it was arranged at the Washington Conference of 1922 that these territories should be given back to China.

development of copra[1] for oils and rock phosphate for manures.

Another and third group of coastal regions and island outposts was acquired off the coast of Africa.

With a view to establishing a colony for liberated slaves, Sierra Leone was acquired in 1787. Lagos continued to be the great depot for the slave trade, and was only taken in 1861 to prevent the traffic from that port. In 1850 Great Britain bought up the Danish forts in West Africa, and the rights of the Dutch were surrendered in 1872. Cape Town, taken in 1795, was given back to the Dutch, was retaken in 1806, and finally kept in 1815. The English, quixotically, paid the Dutch six million pounds compensation for the port, although they already held it by right of conquest.

In the same period Mauritius, then the Ile de France, a point from which the French had intrigued against the British in India, was taken in 1810, and retained at the peace. On the Eastern coast of Africa, Zanzibar and British East Africa were acquired by a chartered company in 1884, known as the Imperial British East Africa Company. Zanzibar in 1890 and British East Africa in 1895 became Protectorates. The inevitable tendency to inland expansion from the coast was again made clear by the retention of Uganda, its elevation to the rank of Protectorate in 1893, and the building of a railway to connect up with the coast. Meanwhile, the African Lakes Company had been active in Central Africa, and part of the sphere of their operations became the Protectorate of Nyasaland in 1891,[2] while the rest formed part of Northern Rhodesia in 1895, and was administered by the Chartered Company of South Africa.[3] Thus another point of inland penetration was initiated.

It is sometimes difficult to realize how recent are these two lines of development in Africa and the Pacific. Africa instead of being merely an obstacle on the way to India, a coast which one passed by to get to another objective, became desirable in itself, but not till the days of railways and steamships. European governments then realized the value of its tropical products now made available by the new transport facilities, and began to scramble for Africa in the

[1] Dried coco-nut.

[2] Its name was changed to that of British Central African Protectorate in 1893, but the old name, Nyasaland, was revived in 1907.

[3] Basil Williams, *Cecil Rhodes*, p. 66.

'eighties. British chartered companies with their instinct for trading profits had already made treaties with chiefs and had obtained concessions in West, South, and East Africa, and enabled England to establish a claim to valuable inland regions.

In the same way the development of Australia and New Zealand gave an entirely new value to the South Pacific and its islands. New shipping routes developed and from the Cape new lines struck south. Steamships also came out by the Canal, called at Ceylon, and again turned south to the Antipodes. Another great line of trade and shipping began to go to the Far East. With Hong-Kong as a central point trade began to be increasingly developed with China and Japan after the opening of the treaty ports in 1842 and 1854. Vancouver, which became a Crown Colony in 1858, and which has excellent supplies of coal, proved an important British outpost for trade in the North Pacific and thus the British Empire had its foothold in both the north and south of the Pacific ocean. This southern and northern trend of trade routes in the Pacific and the penetration of Africa from the North down through Egypt and the Sudan, up from the East through British East Africa and Uganda, up from the South through Southern and then Northern Rhodesia, and in from the West from Lagos to Lake Chad, were all specially characteristic of the expansion of the last half century since 1870.

A second characteristic of the nineteenth century Empire is the radical change in the nature of its trade. Slaves are not now an article of commerce for which European nations struggle.[1] On the contrary, they combine to suppress the traffic.[2] The Spanish possessions are no longer the great source of bullion. Nor is British colonial trade so organized as to obtain a supply of bullion from Guinea, Spanish or Portuguese America, as in former days; the bulk of the gold and much of the silver of the world is now produced within the British Empire. Spices no longer occupy the pre-eminent place, and most of the modern colonial staples

[1] The Board of Trade approved of the slave trade sufficiently to veto an Act passed in Jamaica in 1775 which proposed to put an extra tax on slaves, as "it could not allow the colonies to check or discourage in any degree a traffic so beneficial to the nation". Egerton, *British Colonial Policy*, p. 273.

[2] There is still a certain amount of illicit slave trade in Africa and it is openly carried on in Abyssinia. British gunboats are still employed in the Red Sea to put an end to the export of slaves.

are, indeed, almost wholly new. Wheat, wool, mutton, beef, butter, and cheese were never transferred for long distances till the last two decades of the nineteenth century. The big export of wheat from the Canadian prairies, Australia, and India did not develop till the 'nineties. Not till the 'thirties did large Australian supplies of wool become available and occupy a leading place in the colonial trade. Previously, merino wool was only obtainable from Spain, and then in insufficient quantity for machine production. Spices, sugar, and tobacco are still very important, but whereas tea used to be imported by the East India Company from China, the bulk of the tea for British consumption is now produced in Ceylon and in Assam, where it began to be developed after the monopoly of the East India Company's trade with China was suppressed in 1833 and Englishmen were allowed to settle in India and acquire land.

In 1834 the Indian Government caused tea plants to be brought from China. In 1835 the first tea garden was planted at Luckimpore, Assam. It was not till 1856 that the export became an important item in Indian trade. The present tea plant is a cross between the indigenous plant and the Chinese import. The increased demand in the nineteenth century may be seen from the following figures of tea consumed in England :—

1800	20,358,827 lb.
1835	36,574,004 ,,
1864	88,500,000 ,,
1885	182,408,830 ,,

Indian tea imported into England was :—

1864	2,796,000 lb.
1886	76,585,000 ,,[1]

For the first time in 1888 Indian tea surpassed the China imports.

Coffee was started in Ceylon in 1825 but suffered from a disease (*Hemileia vastatrix*) which ruined the industry after 1876. In its place tea was gradually planted. It is now grown and consumed in quantities previously undreamed of.

The total imports of tea in 1920–21 from India were 292 million lb. and from Ceylon 113 million lb. From China 46 million lb. were imported.

Rubber became commercially important when Mackintosh developed the waterproofing of cloth in 1823, and when the

[1] From *Reports on Colonial Sections of the Colonial and Indian Exhibition*, 1887, pp. 147–8.

vulcanizing process of 1843 found new uses for the product. The Brazilian forests then furnished the chief source of supply, and rubber was also found in a wild state in British West Africa. Rubber seeds were successfully cultivated at Kew in 1876, and distributed to the tropical colonies. After a good deal of experimentation with different varieties, and after proper methods of tapping the tree for the milk had been devised, rubber entered upon the plantation stage towards the end of the 'eighties with a large and increasing production. Even the seed became valuable as source of oil. The production of plantation and wild rubber totalled 370,000 tons in 1920. Of this Malaya produced 57·5 per cent, Ceylon 12·5, South India and Burma 2·0, Netherlands East Indies 25·5, other countries 2·5 per cent.[1] Cultivated rubber has almost ousted wild rubber.

During the nineteenth century there was an ever-increasing demand for oilseeds. They were required for providing the raw material for candles and lamp oil, for such industrial purposes as dressing hides, for soaps, paints, and edible purposes.

Different kinds of oils were, however, required for different processes. Colza oil, made from rape seed, was largely used for lamps till it was displaced by the mineral oil, petroleum, at the end of the 'sixties. This seed was obtained from India.

For paints and varnishes a quick-drying oil is needed, and this is the nature of linseed oil which is obtained from flax seed.[2] The rapid growth of houses owing to the increase of population needed an increased amount of paint and the demands of the railways, for painting their carriages, trucks, and locomotives, all tended to increase the production of linseed oil. Linseed oil also became the basis of the linoleum manufacture which developed in the 'seventies,[3] and this further stimulated the demand. India, in 1910, produced about one-fifth of the world's supply.

Palm-oil had been exported from the West Coast as early as 1787. It was extensively used during the nineteenth century for the same purposes as coco-nut oil, viz. for soaps, candles, lubricants, and in the twentieth century for margarine.

[1] *Cmd.* 1678 (1922).

[2] Flax when allowed to ripen for seed is no use for fibre and the countries that produced the fibre, like Russia and Belgium, did not produce the seed.

[3] Patents were taken out in 1863.

The illuminations for Queen Victoria's wedding consisted largely of candles made from the coco-nut, and we may date the substitution of the vegetable oils for tallow from about that date. In the 'sixties the tin-plate industry took a new lease of life with the demand for tin cans for packing preserved meats and fruits which began with the supply of tinned foods to the Northern Army during the American Civil War. These iron plates coated with tin require a bath or baths of tallow or oil in the process of manufacture and a new demand for the latter arose. The increased use of leather goods, boots, and shoes, which gave rise to machinery in the boot and shoe trade in the 'sixties, increased the demand for oil for treating the leather. The growing need for lubricants for railways and machinery also contributed to the hunt for oils. Napoleon III, anxious to get a product for the French Army which should serve as a substitute for butter, set his chemists to work, and Mege Mouries evolved margarine in 1869, but it was Holland that developed the manufacture about 1870.[1] A factory was set up in England in 1882. For this, animal fats were at first used. As cold storage developed in the 'eighties the carcasses of the sheep were no longer boiled down for tallow but were exported, and supplies of animal fats became more difficult to obtain for either margarine or tin-plates.[2] This drove the soap, candle, margarine producers and other fat-users to seek a substitute in liquid oils. The question was how could they be made solid. Coco-nut oil solidifies at a much lower temperature than most oils, and was therefore the first to be used as coco-nut butter. Thus the coco-nut began to supplement the cow.

Cotton seed was also largely employed in the manufacture of margarine and soap. The enormous value of this oilseed alone may be seen from the fact that in 1910–11 India exported cotton seed to the value of 1½ million sterling and Egypt over 3 millions, some of which would be used for growing fresh cotton plants, but the bulk for oil purposes.

A process known as "hydrogenation" was perfected in 1903 which not only rendered most liquid oils firm but deodorized them at the same time. The same process rendered solid and even deodorized the mal-odorous fish

[1] *Report of Committee on Edible and Oil-producing Nuts and Seeds*. 1916, *Cd.* 8247.

[2] In 1881 the British imports of Australian tallow were 90,000 casks of 7 cwt. each. In 1885 it had dropped to 53,000. *Report on Colonial Sections of* 1887 *Exhibition*, p. 261.

oils. Thus, all the liquid oils, especially palm-oil and palm-kernel oil, acquired a new value.[1]

A solid hard fat was also extracted from the cocoa bean and forms the basis of the " cream " in chocolates.

Meanwhile ground nuts which yield a non-drying oil formed the basis of a trade in salad oil and cooking oils. The chief supplies of these nuts came from India and Gambia, and were treated at Marseilles. India also exported the sesamum seed from which a semi-drying oil was also expressed at Marseilles. This is used for soap, margarine, and as a liquid oil for cooking. In 1911 the value of the export from India of this seed alone was £2,135,839.

The castor oil seed was another of the non-drying oils which formed a valuable lubricant. It was also extensively used in medicine, for dressing leather belting, and for transparent soap. It is now used for lubricating aeroplanes. In 1911 the exports of the seed from India was valued at £1,099,975.

The residue of these oilseeds was made up into " cake " for cattle, and greatly increased the milk yields on the Continent where it was more extensively used for this purpose than in England. The husks are used for paper-making.

It will therefore be seen that the demand for oilseeds, constantly increasing as it did throughout the century and becoming more urgent in the 'seventies, reacted on the West Coast of Africa,[2] helped to make oilseeds one of India's

[1] The palm-fruit consists of an outer rind and a nut, inside of which is the kernel. The rind is boiled down locally by the women and the oil extracted. They crack the nuts and extract the kernels which are sent to Europe to be crushed. Before the war they went chiefly to Germany and Holland for crushing. During the war crushing works were established in England on a large scale.

[2] " The magnitude of the export trade from West Africa of vegetable oils and oil-producing substances is proved by the fact that in 1913 its value amounted to nearly ten millions sterling. Of that trade palm-oil and palm-kernels accounted for over eight millions. Analysed according to the country of origin, the exports from British possessions amounted to £7,519,000, from French possessions (in 1912) to £2,782,000, and from the former German possessions (in 1912) to £535,000. Nor is this all. Rapid expansion is proceeding. Exports from British possessions in West Africa have trebled in value in the last decade. The trade in palm-kernels amounted in 1913 to over five millions sterling or over half the total exports from West Africa. Of this great total over £4,250,000 or four-fifths of the whole came from British possessions. Yet three-quarters of it went to Germany to be milled." *Cd.* 8247, p. 5.

most important exports, and stimulated the growth of the coco-nut throughout the British Tropics.[1]

The bulk of the cocoa consumed in England was formerly produced in the West Indies where it was transplanted from Central America,[2] and it is still a great staple crop in the islands. In 1822 the consumption of cocoa in England was only 500,000 lb. of which one-half was consumed by the Navy. The demand, however, rapidly increased. In 1848 2½ million lb. and in 1888 18 million lb. were consumed.[3] In other words, the rate of consumption had risen from half an ounce per head to half a pound in 1888. Some seeds were brought back from Fernando Po to the Gold Coast in 1879 and by 1891 cocoa was exported to the value of £4 sterling. In 1919 the value of the export was eight millions sterling and the Gold Coast had become the premier cocoa-producing region of the world.[4]

A new fibre, jute, began to be spun in Dundee about 1833. The demand for bags for grain after free trade was established in 1846 gave an enormous impetus to the manufacture of jute. By 1850 improved spinning machinery had been evolved, and the industry started on a prosperous career in Scotland. The Crimean War gave a great impetus to the demand for bags and sacks. In 1857 jute mills were set up near Calcutta. The demand for gunny bags grew so rapidly with the wheat, flour, and other cereal exports after 1870 that the value of the raw jute alone was estimated to be six millions sterling in 1883.[5] Only fifty years after the start of the manufacture in Great Britain Scotland consumed 73,600 cwt. per week, while large quantities were also

[1] On the whole question see Paper on "Oil Resources of the Empire", by Dr. Perkin, *Journal Royal Society of Arts*, April, 17th, 1914. The annual production of oilseed in India is reckoned at £50,000,000 in value. *India* (*Nations of To-day*), p. 244.

[2] Chocolate is a Mexican word.

[3] W. H. Johnson, *Cocoa*, p. 2. "During the years 1898–1908 the world's consumption of cocoa has risen from 70,000 tons to 164,000 tons, an increase of more than 134%. In the same period the world's production has increased from 80,000 tons to 193,000 tons or more than 240%. It is estimated that the area under cocoa cultivation is more than 2 million acres." Op. cit., p. 4.

[4] Dudgeon, *The Agricultural Forest Products of British West Africa.*

[5] Watts' *Dictionary of Indian Products*, "Corchorus."

	Cwt.	
1828 . .	364	sent to Europe.
1832–33 . .	11,800	annual average export.
1852–53 . .	439,850	
1857–58 . .	710,826	
1867–68 . .	2,628,110	
1882–83 . .	7,274,000	

manufactured in the Indian factories, many of them under the management of Scotchmen from Dundee. When floor-cloth and linoleum became common another impetus was given to jute, which formed the back of the canvas on which the surface was spread.

In 1913 India sent 347,000 tons to Great Britain, valued at approximately nine million pounds.

Rice, which was formerly obtained under the old colonial system from the Carolinas, was little eaten by Englishmen till the shortage of cereals during the Napoleonic wars drove them to use it. Its introduction from India was due to the invention of a machine in England for husking the rice. During the nineteenth century it became an article of export from India and Burma and like tea is consumed in such enormous quantities as to form practically a new trade. As the plantations developed in Ceylon, Malaya, in the East and West Indies, and in Natal, to grow sugar, wattle tea, and rubber, rice was required in increasing quantities to feed the coolie labourers employed as well as for a new cereal for the white races.[1] A large proportion of the export was sent to Germany and England and there polished and re-exported. Rice, in fact, followed the coolie round the world.

The demand for tropical produce is steadily increasing in an age which travels on rubber tyres and walks on rubber heels, which keeps itself clean with soaps made from palm-oil, which tries to believe that margarine is as good as butter, and certainly eats it in large quantities and which fondly persuades itself that "pure salad oil" or "huile de Provence" is grown on olive trees in Italy or France instead of being made of ground nuts from Gambia or India. In an age which turns to cocoa as an alternative to claret, and in which tea and coffee are universal stimulants, which consumes sugar in quantities previously undreamed of, in which chocolates are almost as popular as smoking, and in which oranges, pineapples, bananas, and grape-fruit are to be bought on costers' barrows, and in which even German and Dutch cows live on oil-cake made from palm kernels or coco-nuts, the Tropics are bound to assume an ever-growing importance.

[1] The annual imports of rice in Trinidad, Barbados, and Jamaica alone exceed 18,000 tons every year, and the four largest West Indian colonies import at least four million bags. Dept. of Overseas Trade, *Commissioners Report for West Indies*, 1922, p. 16.

The woollen goods of England continued to find a great market in the colonies, but they were supplemented in the nineteenth century by cotton piece goods, a new manufacture in England itself. Indeed, it has been stated that the demands of India alone kept Lancashire busy for three months of the year. An entirely new and vast market has been opened up for engineering products, locomotives, rails, iron bridges and harbour equipment. Before the war of 1914 Australia was Great Britain's largest customer for locomotives, India being second. The new sanitary knowledge also led to a considerable export of iron pipes and other equipment for water supply and sewerage purposes. The things that England both sells to and buys from her colonies are very largely new and the old commodities are dealt with on a scale hitherto unknown.

A third point of difference between the old and the new colonial expansion is to be found in the causes which made people leave their native land as emigrants. There was still the same type of person who went out for adventure, also the clerks and overseers sent out by mercantile houses or as managers of plantations, and the class who left England to "better" themselves in a new land. Religious and political dissent were, however, no longer the great impelling motives to emigration after 1763. Unemployment and the fear of over-population took their place. Canada was peopled, as we have seen, by loyalists from the United States. They supplemented the Scotch who had migrated to Nova Scotia from the Highlands after the pacification, and the soldiers of Wolfe's regiment who had settled after the taking of Quebec, and these were reinforced by other bodies of ex-soldiers after the various wars in Europe and America. After 1815 there was not merely the further settlement of ex-soldiers and sailors, but the great depression in England led to efforts on the part of philanthropic societies and poor law authorities to relieve the over-population and under-employment at home by assisting indigent persons to emigrate. Great land companies wished, like the old colonization companies of the seventeenth century, to make their lands valuable by taking out settlers. The Canada Company, formed in 1825, and the North-West Land Company, formed in 1834, both set themselves to recruit population for their unoccupied tracts of land. The industrial revolution and the after-effects of the wars impoverished the weavers, who were also affected adversely by the drop in

agricultural prices when they happened to be, as they frequently were, small farmers as well. Their position, as well as that of the agricultural labourers, was often rendered more difficult by the enclosures which deprived these classes of the commons for fuel and pasture. When spinning became a factory industry, as it did between 1780 and 1820, an additional source of income was lost to the women and children of the family. These industrial and agricultural changes made the more enterprising of the working classes willing to go to the colonies provided some one paid their passage as the land companies were willing to do. There was such over-population in Ireland that the best remedy appeared to be emigration. In the twentieth century Sir Horace Plunkett calculated that Ireland could not support on the land more than 3 million persons in a decent standard of comfort. There were over 8 million there in 1846. Sheer famine from over-population started the great stream of Irishmen after 1846, and many of them went to the colonies, chiefly Canada. This colony being so much nearer than any other had a lower fare for the passage, and the great bulk of the emigrants either went there of their own accord, or were assisted there by relations and philanthropic societies. They often moved later on into the United States, where the openings were better for an industrial people. Skilled mechanics and engineers migrated all through the century to work the mines, the gas, and water works, the river steamers and the railways. A great deal of emigration was also subsidized by trade unions to relieve unemployment and keep up wages by preventing a scramble for work.

A new feature was the Government assistance and encouragement given to emigration. In the old colonial days the Government looked askance on any loss of population. In the nineteenth century Malthus and his theory of over-population thoroughly scared the ruling classes, and they were only too ready to sanction, supervise, and in some cases assist emigration so that unemployment should be relieved. Economic and not political or religious reasons were the underlying causes of the nineteenth century racial expansion.

Another new motive came into play in the policy which led to the beginnings of Australia. There was a great humanitarian movement at the end of the eighteenth century which had sympathy not merely for slaves but for criminals. The founding of Australia was an attempt to

give gaolbirds another chance. It was the convicts and their guardians who made the beginnings in New South Wales and Tasmania. The Government in taking out convicts necessarily provided a food supply and communications, and it was not until many years after its foundation that the colonists were able to provide their own wheat and meat. Not till a quarter of a century after the foundation of New South Wales did wool open up possibilities of something valuable to exchange and provide an opening for normal trade and ordinary persons. In its beginnings Australia seemed to have no native product for either food or trade.

From Australia, New Zealand was reached and its flax and whales exploited while such curios as the tattooed pickled heads of deceased Maoris were in considerable demand.

Australia was so far off—a nine months' voyage in the very early days. As the fares to the Antipodes were necessarily heavy, assisted passages would have to be provided if the non-convict population were to increase. Land companies with large areas to develop were again to the fore in promoting emigration. The Australian Agricultural Land Company operated in New South Wales, the Tasmanian Company in the island after which it was named, the Swan River Company made in 1829 a beginning in Western Australia, and was followed up by the Australind Company. The settlement of South Australia and New Zealand was begun on model lines by two chartered companies. After 1834 the proceeds of the land sales were devoted first by the British and then by the New South Wales Governments to obtaining emigrants and paying their passage. It takes two or three years for a man to feel his feet and become self-supporting, and he needs the backing of some organization or government at the start if he has no friends or a definite job in the colony. Thus, colonizing companies were important agencies in racial expansion in the new Empire as in the old.

In South Africa with the presence of the Kaffirs there was not the same scope for white labourers. Military governors and regiments were, however, sent out to see that Cape Town was kept safe as a port of call on the way to India. Many of the time-expired soldiers settled in South Africa. The distress at home was so great that the English Government promoted a settlement of 5,000 emigrants from England near Albany in 1819, thereby creating a nucleus of the English race further up the East Coast.

A fourth point of contrast lies in the fact that at no previous period did the Government of the United Kingdom do so much as it did between 1763 and 1914 to assist its colonial possessions in spite of the fact that colonies were very unpopular and the avowed policy of the government was *laissez faire* in general. Under the old colonial system, as we have seen, the Crown took no active part in founding colonies, but the British Parliament of the eighteenth century was willing to pay for their defence. Their commercial development was, however, subordinated to the ideas inherent in the mercantile system. They were expected to supplement and not rival the mother country that spent so much on their behalf.[1] Tariffs and shipping laws were devised accordingly.

Two features stand out in the Government policy of the past century: the first is the generous way in which England financed her colonies, especially when we take into consideration her own financial difficulties during and after the French wars; the second is the reversal of the old policy of commercial restriction, the substitution of commercial freedom. The whole period is one of anomalies. If England had been consistent she would have refused to give any financial help when she adopted *laissez faire* as her colonial attitude and free trade as her commercial policy. Another

[1] *State of the Expenses of our American Colonies from the Accession of the House of Brunswick to Michaelmas*, 1788.

		£
1.	For settling and securing and for defraying the expenses of the civil governments of the American colonies .	1,294,582
2.	For compensation rewards to the said colonies for exertions in their own defence, or for assisting in warlike operations calculated for their own immediate advantage	1,372,518
3.	For bounties granted on the importation of American commodities	1,609,345
4.	To the proprietors of Carolina for purchasing their title to that province	22,500
5.	To the sufferers by the fire at Charlestown, 1740 . .	20,000
6.	Expense of American surveys	34,296
7.	From 1714–75 the money voted by Parliament for the forces employed in defence of the colonies amounts to	8,779,925
8.	From 1775 to 1788 (both inclusive) at the rate of £100,000 per ann.	1,400,000
9.	Extraordinary expenses for forts, garrisons, ordnance stores, presents to Indians	10,500,000
10.	Expenses of fleets and naval stations established for the defence of America	12,000,000
11.	Compensation and relief to American loyalists . .	3,500,000

Sir J. Sinclair, ii, 86–7.

anomaly occurs in the fact that although she determined not to acquire any new territory, yet she never ceased to add to her possessions throughout the century with ever-increasing responsibilities. *Laissez faire* was never completely carried, and in the end was given up for the new constructive imperialism.

Financial assistance had to be given from the very beginning of the new period and three new colonies were directly founded by the Government: New Brunswick, Ontario, and New South Wales, which in those early days included what is now Victoria, Queensland, and Tasmania as well. This was a new departure. Previously the Government had permitted colonies to be founded but had not been itself the direct instrument of colony founding. In Ontario, Government agents surveyed the land and planned the townships, and the Government assisted the settlers with a grant of £3,000,000, a very large sum in the days when the annual revenue of England was round about £12,000,000.[1] The Loyalists had to be clothed and rations provided, and the Government erected no less than four flour mills in Ontario

[1] The income of—

	£
James II was	2,001,855
King William	3,895,205
At the Union	5,691,803
George I	6,762,643
George II	8,522,540

Sir J. Sinclair, *History of the Public Revenue*, iii, p. 33.

The figures for the seventeen-eighties are as follows :—

	£
1780	12,255,000
1781	12,454,000
1782	12,593,297
1783	11,962,718
1784	12,905,519
1786	14,871,520
1787	15,360,857
1788	15,572,971

Of the grant to the United Empire Loyalists, Sir J. Sinclair says: "Perhaps the most splendid instance of public generosity which the world has as yet exhibited is to be found in the conduct of the British legislature at the conclusion of the American war, who, undismayed by the loss of thirteen provinces and all the enormous debts and taxes of which the war was necessarily productive, did not hesitate to hold forth hopes of compensation to those who suffered by their attachment to the mother country in the course of the contest.

"It must yield no small satisfaction to every citizen of this country to be able to produce so unparalleled an instance of national liberality and spirit, and the business being now in some measure concluded the most penurious can hardly wish it undone, notwithstanding the expensive consequences of which it has been productive." Ib., pp. 84–5.

to grind their corn.[1] The public works, such as the canals undertaken by the Government to avoid the St. Lawrence rapids, provided at a later date much-needed employment for emigrants. Up to 1835 the Rideau Canal cost Great Britain £300,000. It had been offered to the Government of Upper Canada, which had declined to take it as a gift.[2] The frequent deficits in the Canadian Civil List were, perforce, made up by Great Britain and she guaranteed another £3,000,000 towards the Inter-Colonial Railway to make confederation workable in 1867.

Cape Colony was acquired in 1815, and £6,000,000 compensation paid to Holland. In 1820 the Government advanced £50,000 to take out 5,000 British settlers to Albany in South Africa. The Kaffir wars continued to be a great source of expense for the first three-quarters of the nineteenth century. The convict settlements were also a source of annual outlay in Australia, amounting to about £300,000 a year[3] as the revenue did not balance the expenditure up to 1833. Another £215,000 was found in 1830 to surmount the first unfortunate beginnings of South Australia,[4] and a further £250,000 was necessary in 1842 to extricate the settlers in New Zealand, who had been taken out by the New Zealand Company, from their difficulties.[5]

Grants in aid of emigration were made by Parliament in 1819 (£50,000), 1821 (£68,760), 1823 (£15,000), 1825 (£30,000), and 1827 (£20,480). From 1834 to 1878 sums varying in amount up to £25,000 were voted annually by Parliament for the removal of indigent people from this country.[6] These grants were in addition to the assistance given by guardians and other local bodies. Though the motive was one of relieving poverty at home rather than helping the colonies, it did help to provide them with a nucleus of labour.

It must be remembered that the population of the United Kingdom was only 24 million in 1831, i.e. 13,896,797 in England and Wales, 2,364,386 in Scotland, and 7,767,401 in Ireland, and that the revenue in 1831 was approximately

[1] Shortt and Doughty, *Canada and its Provinces*, vol. xviii, p. 553.
[2] *Parliamentary Debates*, Ser. III, xxix, p. 459.
[3] Porter, *Progress of the Nation*, 2nd ed., p. 768.
[4] Mills, *The Colonization of Australia*, p. 256.
[5] Reeves, *The Long White Cloud*, p. 231.
[6] Johnson, *Emigration from the United Kingdom to North America*, p. 19.

fifty millions, a sum which was not kept up as in 1841 it had dropped to forty-seven and a half millions sterling. From 1816–33 there had been eleven years of deficit out of the seventeen with fresh borrowing to make both ends meet and more interest to be found somehow by taxation. Every class was clamouring against what they considered to be the excessive weight of an intolerable financial burden, and it was not mere factitious ineptitude which made the majority of people in these islands regard the colonies as anything but " the brightest jewels in the British Crown ". On the contrary, Disraeli expressed a fairly general sentiment when he said in a letter that " the wretched colonies " were " millstones round our necks ". It was considered to be an argument for free trade that it would tend to separate us from the burdensome colonies.

In 1837 MacCulloch in his *Statistical Account of the British Empire,* pointed out that the colonies cost Great Britain no less than £2,364,309 in the years 1833–4. He continued : " Nothing, in fact, can be a greater mistake than to suppose, as many have done, that we are mainly indebted for our wealth and the high place we occupy among the nations of the earth, to our colonial possessions. We owe these distinctions to the favourable situation and physical capacities of our native country, the intelligence and enterprise of our people, and the emulation inspired by our free institutions and by the inequality of fortune that subsists amongst us. The truth is that we have derived ten times more advantage from our intercourse with the United States since they achieved their independence than we derived from them while we had a governor in every state, or than we have derived from all our colonies put together. And this advantage has not been accompanied by any drawbacks. We have not been obliged to purchase the timber and other commodities of the United States when we might supply ourselves better elsewhere, and we have not been obliged to keep up armaments for their protection or to encumber ourselves with the government of extensive countries on the other side of the Atlantic." [1]

The £20,000,000 spent in 1833 in compensating the slave owners did not end the expenditure on this account.

In spite of the cries of " peace, retrenchment, reform ", the Imperial Government was spending in 1865 a sum which

[1] p. 597.

could not be less than £320,000 per annum on the West African settlements, which at that date was nearly one-half per cent of the total revenue of the United Kingdom.[1] Consul O'Neill, formerly an officer of H.M.S. *London*, the gunboat delegated to suppress the slave trade, considered that no less than 5 millions sterling had been spent in fifty years by England in attempting to suppress the slave trade, and the crews had suffered between 1880 and 1890 no less than 282 casualties besides invalidings.[2]

The vacant colonial Crown lands were given over to the Australian colonies in 1855, and their sales formed an important source of revenue for New South Wales, i.e. England surrendered these assets when she might easily have retained them to offset her losses in the past on the colony.

Year after year we come across official statements as to the heavy cost of the various Kaffir wars in South Africa, all designed to strengthen England's abhorrence of any forward movement in the colony.

In 1867 Lowe declared in the House of Commons that " In the time of the American Revolution the colonies separated from England because she insisted on taxing them ; what I now apprehend as likely to happen is that England will separate from her colonies because they will insist on taxing her ".[3]

A return to the House of Commons,[4] August, 1880, put the expenditure for Civil and other services in the colonies between 1869–70 and 1879–80 at £2,285,310, while the expenditure for Military Services was £26,406,189. Among these items was £100,000 to the Transvaal in 1877–8, " to meet immediate necessities," £33,000 to Sierra Leone " to assist in financial difficulties ", £25,206 to Natal for the construction of telegraph lines, £105,000 was given to Fiji between 1875–8. The salaries of the Governors and their pensions were also defrayed by England. This remarkable sum of £28,691,499 spent in ten years was given at a time when a great depression had set in in England after 1873.

The financing of colonies took on rather a different complexion after 1890. As the self-governing colonies

[1] Lugard, Article on " West Africa " in *The Empire and the Century*, 1905, p. 839.
[2] Lugard, *Dual Mandate*, p. 358, n. 1.
[3] Quoted Bruce, *Broadstone of Empire*, i, 143.
[4] Abstract of the cost of the several colonies of the British Empire at the expense of the British Exchequer for the years 1869–70 to 1879–80.

reached that status they no longer required financial assistance from the government in the shape of grants in-aid, but they received it from the British public in the form of loans on which they paid interest.

Perhaps the most striking instance of the new willingness to help the colonies was the money given to the two Boer republics for reconstruction after the war in 1902. So far from the victor receiving an indemnity, she paid one of £6,900,000 for compensation and repatriation to enemy Boers and loyal British subjects and guaranteed a loan of £35,000,000 at 3 per cent, with which railways were rapidly built. This is in striking contrast with the earlier attitude towards Cape Colony. But at this period England was so much richer that the amounts spared were not felt to the same extent.

Instead of the money being grudged it was now freely and even generously bestowed upon the development of the Tropics. The rights of the British East Africa Company which had got into financial difficulties, were acquired for £250,000 in 1894 and the Uganda railway was built at a cost of $5\frac{1}{2}$ millions to the British Treasury on which no interest has ever been paid or demanded. The Royal Niger Company was bought out in 1899 for £865,000, and the raising of the West African Frontier Force for the protection of the colony was authorized and paid for out of British funds. The total grants made to Nigeria between 1901 and 1919 were £4,261,000[1]; to Uganda, £2,648,000, and East Africa £2,843,383, until they became self-supporting in 1912. Taking possession of Papua cost England £52,000.[2]

The West Indies after the development of bounty-fed sugar in 1866, needed almost annual assistance until the Imperial Department of Agriculture and other factors combined to revive their prosperity.

While the sums found for British colonial development were large in comparison with the national revenue of the days when they were granted, and therefore testify to a not ungenerous spirit, the most significant change is to be

[1] "On the other hand, a great part of the grants was transmitted to Nigeria in silver coin on which the Treasury admitted a profit of 58%. Since Nigeria has already incurred an expenditure approximating a million, and proposes to accept a further six millions on behalf of the Imperial War Debt, it will be seen that this vast country, which affords an increasing market for British Industry and Commerce, has been acquired at no cost whatever to the British tax-payer." Sir F. Lugard, in *Report on the Amalgamation of Northern and Southern Nigeria, Cmd.* 468, 1920, p. 48.

[2] Colonial Office List, 1916, p. 89.

found in the triumph of free trade principles in the period 1840 to 1860. The new imperial policy was that of the open door. Navigation Acts were finally abolished in 1849, which meant that foreigners were free to buy and sell, and carry on the shipping of the colonies, and that the colonists were able to trade where and with whom they liked. The colonies were "enabled"[1] to abolish their tariff preferences on English goods after 1846, when the bulk of the colonial preferences in England were swept away in the modifications of the tariff necessary to carry out free trade. So great was the "change of heart" from the days when the trade of the colonies was largely regulated for the benefit of the mother country that we find that the protectionist tariff of Canada in 1859 was not vetoed, and thus the colonies were even allowed to put on tariff-barriers against the mother country itself. No restrictions were placed on the trade of foreigners with any British colonies and they were treated in the same way as British nationals.[2]

It was characteristic of the open door policy that no trading monopoly was permitted to any of the great chartered companies of the 'eighties, though, as a matter of fact, the Royal Niger Company saw to it that they had a virtual monopoly up to 1899, when the Crown assumed control.

England still had the power to enforce her theories in India and the Crown colonies, and they were kept on the straight and narrow path that was held to lead to economic salvation. The abolition of internal tariffs, and preferences, the setting up of free trade and a low revenue tariff were finally triumphant for India in 1882. Export duties were held to be radically unsound and were abolished where possible, though for revenue reasons it was necessary to retain some of them. Though the long list of Indian export

[1] *The Enabling Act*, 9 Vict., c. 14.

[2] "Suppose we had not had the rich fields of South and West Africa, Australia, India, and the Far East, Canada, where the Anglo-Saxons had done the preliminary work, but had had to begin at the very beginning in the acquisition of our raw materials, should we have climbed so quickly to the position of a great industrial and commercial power? Our rise depended essentially on the English policy of the Open Door. The secret of our success lies, apart from the organization and training of our working classes, in the fact that England and the countries which are the great producers of raw materials granted us an Open Door, allowed us to draw on their vast reservoir of raw materials." "We climbed by means of England's policy of the Open Door."—E. Zimmermann, *The German Empire of Central Africa*, 1917 (translated Bevan), p. 2.

duties was cut down to rice in 1882, the export duty on tin has been a constant and most important item in the revenue of the Malay States.

From 1833, when slavery was abolished, to 1870 the atmosphere became less and less favourable to colonies under the domination of the free trade movement. England, now organized for world trade, had no use for the narrower limits of colonial trade and colonial preferences. The British possessions were regarded as excessively burdensome. With Kaffir wars and Maori wars and an Indian mutiny in 1857 there seemed to be no end to the expense in which England was involved on their behalf.

England not merely considered her colonies to be a great drain on her resources but she looked forward to the time when they would be independent nations who could support themselves. Self-government to Canada was welcomed as tending to relieve this country of the burden of colonial maintenance.[1] Even annexation of that country and the West Indies by the United States was contemplated with equanimity. Meanwhile, English statesmen determined in vain not to acquire another yard of territory in Africa.

In 1850 the Privy Council besought the Queen that the Orange River Colony should be the last British acquisition in Africa, and recommended, "that all officers who represent, or who may hereafter represent, Your Majesty in Southern Africa should be interdicted in terms as explicit as can be employed and under sanctions as grave as can be devised from making any additions, whether permanent or provisional, of any territory, however small, to the existing dominions of Your Majesty in the African continent."

England was so anxious to divest herself of colonies that she gave away the Ionian Islands in 1863. A Royal Commission recommended in 1865 that the British should leave West Africa; it was proposed that the West Indies should either be given away to the United States or should be encouraged to become independent. Gladstone was prepared to surrender Uganda in 1892. And yet there was

[1] "We shall simply be saved the trouble and expense of the Government of Canada and these have been of no trifling nature. We believe our colonies have cost this country an amount of money which it is impossible to estimate in wars, in protective duties, and in expenses of government. We shall not regret to see more of them follow the example of Canada and be at the trouble and expense of maintaining themselves." *Dundee Advertiser*, quoted Porritt, *Fiscal and Diplomatic Freedom*, p. 283.

always a cross-current causing this country to assume fresh colonial responsibilities.

After the reorganization of the Colonial Office in 1830 the term "Crown Colony" was for the first time applied to the tropical possessions under the direct control of the home government, and the change of classification implies a new recognition of responsibility for those areas specifically recognized as under the Crown.[1]

India was one of the most powerful factors making for the abandonment of the *laissez faire* attitude. The mutiny of 1857 inaugurated a new era of public works undertaken by the Central or provincial governments in India. However much the English people disbelieved in Government action of any kind for themselves or for their overseas possessions, the succession of famines made it impossible to acquiesce in a policy of non-intervention when confronted by starving millions unable to help themselves. The very abolition of the company and the assumption by the Queen of the title Empress of India in 1877 implied a recognition of a new responsibility for India. Therefore, even at the height of the *laissez faire* period the influence of the responsibility of India was working in the opposite direction.

In the same way, although England did not believe that a Government was able to do anything properly, she became involved in a policy of land settlement for Australia. She had taken out convicts, she therefore became responsible for the introduction of a corrective element. Wakefield had started an agitation in favour of systematic emigration by his *Letter from Sydney* in 1829. He claimed that land ought to be sold and not given away, and that the proceeds should be devoted to paying the passages of emigrants. This was done in 1831, and the Government instituted a new department to sell the land and send out emigrants. These Land and Emigration Commissioners had also the duty of supervising the passages of the coolies who were brought to the West Indies and Mauritius to fill the gap created by the emancipated slaves who could no longer be forced to work.

One point is quite clear, that Great Britain did not

[1] "Fifty years ago he wrote in a detailed memorandum prepared in or about the year 1885, the colonies were divided in general into two classes—Crown colonies in which the Crown was almost absolute and colonies having representative institutions. . . . The executive was in all cases alike composed of permanent officers appointed by the Crown." Marindin, *Letters of Lord Blatchford*, p. 296.

attempt to influence the economic development of the colonies in any way that she conceived would have been contrary to their interests. She honestly believed that *laissez faire* and free trade were right for all mankind, and she tried to apply those principles. The outcome was the policy of self-government and economic self-determination for the regions of racial expansion. Where she realized the necessity for financial help she provided the money, where she found patent abuses she tried to remedy them in spite of the general theory.

The idea of economic alliance with the self-governing dominions and the definitely expressed assumption of the trusteeship for native races both emerge as new features of British colonial policy after 1895. There is nothing resembling either of them under the old colonial system.

Whether the British Parliament viewed colonies without enthusiasm but did its duty, as in the period before 1895, or whether it became more and more inclined to the imperial connexion, as it did after 1895, the general result was that whatever party was in power all through the nineteenth and twentieth centuries the British possessions never ceased to expand in territory, population, and wealth.[1]

A further contrast between the old and new Empires lies in the motives for expansion.

The predominant motive of British expansion which actuated both individuals and the Government in every century was the desire to obtain markets, food products, and raw materials. But in the nineteenth century new factors came into play and accentuated the urgency for both. These were the demands of the industrial revolution, the competition of new nations like Germany and the United States, and the enormous growth of population in England and elsewhere, which needed new food supplies and new markets. The coming of machinery created a demand for hitherto unheard-of quantities of raw materials, coal, and minerals. The desire to obtain raw cotton in increasing quantities led to the development of Central

[1] The British Empire

	Sq. miles.	*Population. millions.*	*Trade. millions.* £
1800	1,500,000	20	80
1850	4,500,000	160	244
1900	11,300,000	390	1,467

Quoted in *Historical Atlas of the British Empire*, Grant Robertson, p. 11.

India and Central Africa. Industrial chemistry gave a value to all sorts of new products like rubber which reacted on Ceylon and Malaya. New uses were found for metals like tungsten, lead, tin, copper, nickel, and asbestos, which affected mineral development in Australia, Nigeria, Malaya, Burma, Ontario, and Tasmania. The railways enabled those commodities to be moved at prices that allowed them to be profitably utilized, and the demand of the new town populations for food gave a stimulus to all agricultural countries such as Canada, Australia, New Zealand, and India. They in their turn proved to be good markets for the huge production of the new machines. Capital was made rapidly by the captains of industry, bankers, and others, and was invested in colonial undertakings and caused an accelerated pace of colonial development.

In England the practice of primogeniture has always tended to send the younger sons to the Colonies. In the nineteenth century the increase in the numbers of the middle classes made it more and more difficult for their sons to find their niche in England. They therefore went "abroad" in large numbers to find employment and new spheres of usefulness.

In his desire to foster trade the Englishman has gone to new Tropics, has exploited new islands, penetrated the interior of Africa, and has developed the resources of the world in consequence.

"Who were the first to turn the alfa grass of North Africa to the practical use of making paper? Englishmen. Who first created palm oil as a trade product, now being sold annually for millions of pounds? Englishmen—the sneered at 'palm oil ruffians' of the first half of this century who did more than anyone else to unconsciously abolish the slave trade by providing a commerce more lucrative and infinitely more honourable. It was Englishmen like Sir John Reid, Sir Alfred Moloney, and others, who started or developed the trade in rubber and gums on the East and West coasts of Africa. Englishmen first of all have developed the cultivation of cotton in the Zambesi countries and in Egypt. Who first discovered diamonds and gold? Englishmen. And the nitrates which it is hoped may yet add to the exports of Egypt? An Englishman, Mr. Floyer. Who first stimulated the cultivation of ground nuts in the Gambia

which now produces nearly all our finest olive oil generally manufactured at Marseilles? Englishmen. Who introduced the tea plant into Natal and created what is likely to be a most flourishing trade in tea in that gallant little colony? Englishmen. And last on this list of agricultural products, who were the first coffee planters in Central Africa? A dogged little band of Scotchmen. Who constructed the first railways in Africa which brought prosperity to Egypt and turned Cape Colony from a little red patch on the southern extremity of Africa into a vast Empire? Who encircled the whole continent with telegraph cables and conceived the carrying out of the bold project of traversing Africa from South to North by telegraph wires? Who put the first steamers on the Niger, on the Zambesi, on the Congo, on the Nile, on the Gambia, on almost every navigable river? Englishmen."[1]

As the industrial revolution developed in Germany, France, and the United States after 1870, there was a general trend towards higher tariffs, with a consequent exclusion of British goods, which found expression in the German tariffs of 1878 and 1903, in the French tariff of 1892, and in the MacKinley tariff of 1890 and the Dingley tariff of 1897 in the United States of America.

As France, Germany, and the United States developed their "great industry" there was a growing competition for raw materials and minerals and an intensified struggle for tropical and other markets.

The colonies had taken about a third of the whole British export trade after 1850, and there seemed no reason why they should not prove themselves still better customers in the future.

The export to the colonies helped to relieve the depression of English industries between 1873 and 1886, and this awakened a growing interest in the possibilities of extending trade between England and her colonies. Great Britain could not stand still, either she must extend her markets or her increasing population would no longer find employment, she must try to sell increasing quantities or her town population could not buy their food. Thus British attention was increasingly focused on new outlets for manufactures.

"It has been said that in Africa two-thirds of the natives are unclothed and one-third half-clothed, and that it is

[1] Sir H. Johnson, "England's Work in Central Africa": *Proceedings Royal Col. Institute*, 1896–7, p. 65.

England's mission to clothe the half-clothed and half-clothe the unclothed. Even a rough statistical estimate of the number of yards of grey shirtings and other mysterious cloths of commerce needed for such a purpose would far and away outrun the capacities of all the mills of Lancashire and India combined. It has also been asserted that if these many millions or even any large proportion of them could be prevailed upon to wear flannel next the skin Australian squatters no less than Bradford manufacturers would have unprecedented cause for rejoicing."[1]

Speaking in 1915 of " the fifteen million people in British East Africa, Uganda, the Eastern Congo, and the German Lake districts, for all of whom the port of Mombasa is their shortest route to the outside world ", Major Leggett said that these 15 million took about eightpence worth of clothing per annum per head. In the more forward regions of Africa the figure per head is three to four shillings' worth per annum.

" Reckoning nothing for the further advances of civilization there is thus within assured view a jump in the trade of those countries from the five millions of last year to something like twenty millions sterling. . . . Ten million pounds' worth of food and raw materials to come each year to the people of Europe and ten million pounds' worth of home manufactures to go out in exchange."[2]

The possibilities of expanding markets in Africa and Asia seemed to give a new value to their colonization.

An attitude of *laissez faire* was no longer possible after 1880 in view of the foreign rivalry, the need for wider markets and for increasing quantities of raw materials which might be developed in the colonies. The new Empire, like the old, is based on commerce. While the colonies must sell agricultural or mineral products, their population being too small to use a large output, the enormous requirements of the mother country and her world-trading activities made her able to absorb or dispose of colonial goods of all kinds.

One has only to gaze in the windows of the Agencies of the Dominion governments in and round the Strand to see not merely an advertisement of their possibilities, but to realize that colonial governments are commercial firms

[1] Baden-Powell, " The Development of Tropical Africa " : *Proceedings*, 1895–6, vol. xxvii, p. 223.
[2] *J. R. Soc. Arts*, vol. lxiii, p. 217.

on the grand scale. The Dominion governments organize the marketing of their products and even subsidize the export of certain types of goods. The British Government, too, is a great trader when it is a question of the Crown colonies. Since 1833 a group of men with a fixed salary have been attached to the Colonial Office, they are known as the Crown Agents. Previous to that date each colony had its own agent.[1] The colonial Governments are compelled to obtain all their requirements, whether they be materials costing millions for railway or harbour construction or small articles costing only a few pounds, through the Crown Agents. In this way is transacted the business of no less than 44 colonies,[2] and the greater part of the capital expenditure of colonial revenues is spent in the United Kingdom unless she cannot supply the goods. The Crown Agents also conduct the issue of loans. The enormous size of the business they do is best realized from the annual accounts issued by the Crown Agents' Office. In the year ending December, 1914, the cost of the stores purchased was £4,790,691, miscellaneous business was £21,650,077, and the total business was £33,124,247. The payments for work done by the Crown Agents' Office amounted to £140,224.[3] The revenue was provided from a charge by the Colonial Office of one per cent commission on all stores obtained through the Crown Agents.

"One view then which may be taken of the British Empire is that it is a gigantic wholesale business under British management, conspicuous for the number of its departments. The English have not specialized in any particular climate or in any particular product. The business is co-operative and profit-sharing, and some of the managers are permanently in residence beyond the seas."[4]

Speaking before the Birmingham Chamber of Commerce in 1897 Mr. Chamberlain emphasized the preoccupation of the British Government with trade expansion. "All the great offices of state are occupied with commercial affairs. The Foreign Office and the Colonial Office are chiefly engaged in finding new markets and in defending old ones. The War Office and Admiralty are mostly occupied in preparation for the defence of these markets

[1] *Colonial Office List.*
[2] *C.* 3075/188 and *Cd.* 1944/1904 are reports on their work.
[3] *Cd.* 7973 (1915).
[4] Sir C. P. Lucas, *The British Empire*, p. 165.

and for the protection of our commerce. The Boards of Agriculture and of Trade are entirely concerned with these two great branches of industry. It is not too much to say that commerce is the greatest of all political interests, and that that Government deserves most the popular approval which does most to increase our trade and to settle it on a firm foundation." [1]

This underlying commercialism of the British Empire, "a nation of shop-keepers," is in sharp contrast with the French impulse to "glory" and the desire to spread French civilization as being the best for mankind, white or black, which has been the basis of the expansion of French dominion in the nineteenth century.

Another motive of expansion which was a new one in the nineteenth century was the feeling of responsibility for native races, coupled with a desire to suppress the slave trade within the continent of Africa. This caused the British penetration into Nyasaland and into Northern Nigeria,[2] and it is this responsibility for primitive peoples that is a new feature of British expansion. Prior to the nineteenth century, when England was only concerned with forts on a coast either in West Africa or India, she did not affect the social structure of native life at all. In the nineteenth century she became responsible as never before for the lives and well-being of the coloured races when she penetrated the interior. In the Pacific the lawlessness and anarchy which had followed the contact of white traders and adventurers with native races, necessitated interference for the sake of preventing the shameless treatment of natives. This was one of the reasons which led to the annexation of Fiji and New Guinea. In India much of the expansion in the North was undertaken to protect the cultivator of the plains from the inroads of the hillmen

[1] Quoted, Woolf, *Empire and Commerce in Africa*, p. 7.

[2] "That (the taking of Northern Nigeria) was mainly prompted by a desire for fresh markets and a field for commercial enterprise may at once be conceded. But it would be unfair and unjust not to recognize as well that it was prompted also by a real and genuine desire for the welfare of the inhabitants, by substituting an era of law and order for the pitiful condition of insecurity and inter-tribal warfare in which they lived. It is quite impossible for anyone who has not lived and travelled in the regions of Equatorial Africa to realize what this condition was. Perpetual slave raids and internecine wars, with their concomitant miseries, were the established order of things: the strong preyed upon the weak, whole towns were blotted out in inter-tribal warfare, the inhabitants being either killed or carried off into slavery." Orr, *The Making of Northern Nigeria*, p. 48.

and the spread of English influence generally was due to the desire to promote law and order. Whereas in the early Empire the motive of fighting the Catholic power of Spain had been an idealist motive at the back of much of the British activity in the New World, so the ideal of giving personal freedom, law, order, and justice was at the back of much of the nineteenth century African expansion. To this must be added the wish to convert the heathen to Christianity, and missionaries proved to be great pioneers of the British Empire. But even this philanthropic and missionary work had an economic value. The converted native has to be taught a trade, he makes things for exchange, he develops new wants, and becomes a better customer for British goods.

"There is one agency which has done more perhaps than any other for the development of the British possessions. That is the pioneer work of the missionaries—of such men as Livingstone and Moffatt. I put aside the spiritual aspect of such work, and am looking merely at its economic advantages to a State. Missionaries are usually active agents in teaching industrial work amongst the natives and creating within them new habits and desires, all of which tend to the increase of commerce. In the missionary enterprises of to-day the necessity of teaching the native some industry whereby he can obtain his livelihood after conversion is more and more recognized. . . . I feel convinced that that Government is wise that will foster and encourage missionary effort for the sake not only of the spiritual advantages but also the temporal. Mr. Rhodes gave free access to missionaries of all denominations into Mashonaland when that country was first taken over by the chartered company, and thereby I consider he showed his wisdom and statesmanship." [1]

Another powerful motive of expansion has been the rivalry of France. Great Britain emerged from the Congress of Vienna in 1815 the undisputed great power in Africa, Asia, and America. The rivalry of the French was temporarily over. The interesting thing in the nineteenth century is to see France recover her lost ground and build up the second greatest colonial Empire in the world, chiefly after 1870. Having lost her main possessions in India, she developed a second Indian Empire in Indo-China

[1] "The Extension of British Influence and Trade in Africa," Lugard, *Proceedings*, 1895–6, p. 33.

next door to the new expansion in Malaya which England was going to initiate from Penang and Singapore. Having lost the region of French settlement, Quebec, she became the great Mediterranean colonial power with a new racial expansion in Algeria and in her protectorates of Tunis and Morocco. Tasmania and Western Australia were partly settled by the English for fear the French might try to found in Australasia new points of racial expansion, and the English Government acquired New Zealand in 1840, although they did not want it, to keep it from the French, who did want it and had dispatched a shipload of emigrants to settle there. The rivalry of France and England in West Africa has led to the expansion of both countries in that region, and no impulse has been more potent in causing the railways to be built into the interior than the fact that the French were creating a railway net in their West African possessions which would, unless countered by British railway development, tap and absorb the trade of the British possessions. The forward policy in India was begun by Wellesley in consequence of Napoleon's occupation of Egypt and his avowed intention of recovering the French position in India. The troops of the two most important Indian rulers, Scindia and Tipoo, were already being trained by French officers. The British expansion in Burma was undertaken to prevent the French extending beyond the Mekong valley, and the Eastern side of the Malay Peninsula was acquired partly to anticipate a possible growth of French power in that region. The chief motive of the acquisition of the Sudan was to prevent it falling into French hands with the consequent control of the Nile, the waters of which spelt prosperity or failure to all Egypt. Northern Nigeria was only acquired five days ahead of the French. A new rival, Germany, appeared on the scene after 1884, and still further stimulated the growing interest in Europe in colonial expansion and development. The result as far as England was concerned was that the great wedge of Rhodesia was driven by Rhodes and his chartered company in between the two sides of German Africa which, if they had coalesced, would have prevented the spread of the British to the North of the Transvaal. To the appearance of Germany in the Pacific the expansion of English rule in the Pacific islands in the 'nineties may be partly ascribed.

The English acquisition of fresh territories was not due

to the dog-in-the-manger policy of sheer desire to keep France out. Up to 1866 France pursued the policy of excluding foreigners and foreign goods from her colonies, then there ensued a period of freedom which was succeeded after 1884 by a reaction. Since that date France has concentrated her colonial trade as far as possible on France by arranging that in the "assimilated colonies" French goods should enter free of customs just as they would go from Paris to Marseilles; foreign goods, however, paid customs duties at the rate of the French home tariff. This system of exclusion in earlier times and discrimination in later times made it difficult for the British to acquiesce in the commercial domination of new regions by the French. To preserve the open door for all-comers was after the 'fifties the aim of policy of Great Britain, and one great motive of her expansion was to prevent her own commercial exclusion. "We develop new territory as Trustees for Civilization for the Commerce of the World," said the great imperial statesman Joseph Chamberlain.

England, unlike France, does not, therefore, aim at "assimilation". She does not expect or try to make an Englishman out of a native. There is accordingly no conscription in the English colonies. M. Jules Cambon once said apropos of English colonization: "Les Anglais ont de la methode mais pas de système." It is exactly this application of "system" that has laid the French colonial administration open to much criticism from Frenchmen.[1] It is true that the English have no "system". It would be absurd to have one in an empire differing so widely. But they have been actuated by two great ideas, the desire to respect the independence of the racial dominions and the desire to alter as little as possible consistently with the welfare of the native inhabitants in the Tropics. Their methods are bound up with their great engineering skill, and their business in life is to overcome material obstacles. Thus great public works, railways, docks, wharves, waterworks, and irrigation have been their hall-mark in both the white and the coloured colonies.

The primary method of British colonization is road-making, whether it be an ordinary metalled road or a railroad.

It has been said that the first thing a German builds in a colony is a barracks, a Frenchman a café, and an

[1] Girault, Vignon, Baudrillard.

Englishman a road. For instance, in the Malay Peninsula, "all the money which residents could borrow from the Colony and all the surplus revenue at their disposal after meeting the absolutely necessary charges of administration was expended in the construction of roads . . . It is not an easy task to construct really good well-graded roads through an unexplored country, covered with virgin forest and the dense undergrowth of a moist tropical climate, with hill and swamp alternating, and a rainfall of from 80 to 160 inches annually."[1] In Selangor, "Six-foot bridle roads were constructed with a good gradient, no metalling, and very simple and cheap bridges. This was done at about £150 per mile, and as soon as the traffic justified the expense, the bridle road was made wide enough for cart traffic and eventually the earth road was converted into a first-class metalled road with permanent bridges."[2] This system of road-making was soon adopted in other states of the peninsula. A mere bridle road had these advantages: It was rapidly and cheaply constructed and cost little to keep in repair. It opened up the country, and people soon settled and took up land by the side of the track. "A bridle road was no sooner completed than small houses, plantations, and fruit and vegetables sprang up along its whole length. When funds were available and the traffic showed that the road was proving its use, it was widened and metalled." The modern visitor can hardly realize the trouble taken "to coax Malays and Chinese and Indians to settle in the country, to build a better class of house than the flimsy shanties . . . hitherto regarded as the height of all reasonable ambition".[3] It is this practical empirical method of proceeding that is essentially British.

In a chapter characteristically labelled "Fruits of Victory", it is recorded of Jameson, when administrator of Southern Rhodesia under the Chartered Company, that although the English did not go to Mashonaland till 1890, "by the end of 1894 he had 1,000 miles of made roads in the country; the Beira railway was 'through the fly' to Chimoio, and the 230 miles of road from Chimoio to

[1] Swettenham, *Malaya*, p. 237.
[2] Ib., p. 238.
[3] Op. cit., p. 239. See also Moncrieff, *The Roads of the North-West Frontier of India*, Blackwood, June, 1924. Also any annual report of the continental areas comprising the British Tropics.

Salisbury was covered by a coach service of less than two days." [1]

The Englishman has insisted upon establishing security in his tropical and racial expansion. Easy communications are a necessity both for peace and order and for trade. Like the old Romans, the English are essentially road-makers and for much the same reasons, namely, Law and Order. After all, the whole of the old Roman Empire at its greatest extent would fit into either Canada or Australia, and the Romans never tackled the Tropics except in Egypt. It is the size of the British Empire and the variety of its economic problems that have been unparalleled by any other of the great Empires of the past.

[1] *Colvin*, i, p. 305.

BOOK TWO

THE BRITISH TROPICS

BOOK TWO

SYNOPSIS OF PART ONE

The History of the Modern Economic Problems of the British Tropics and Subtropics

Three external factors in tropical development—the demands of trade, the development of mechanical transport by land and sea, and the policy of the Government.

A. *The effect of new cultures and new demands on the British Tropical Colonies.*

(1) Staple products in tropical areas.

Decline of the West Indies.

Ceylon: Coffee planting, 1824; transition to quinine, cocoa, tea, rubber, and coco-nuts.

The importance of Indian products.

Federated Malay States and tin-mining; rubber production.

Nyasaland: Cotton, coffee, tobacco, tea.

East Africa: Sisal hemp, cloves, coco-nuts.

West Africa: Cocoa, palm oil and kernels, ground nuts.

Revival of the West Indies, 1897; the Imperial Department of Agriculture, Jamaica, and the banana trade.

Minerals: Rhodesia, Upper Burma, Malaya.

Timber.

(2) The importance of cotton growing in Empire development.

Cotton responsible for the development of new areas, transport facilities and peasant farming.

The shortage of raw cotton in the 'forties; the stimulus to India and Egypt.

The shortage in the twentieth century; cotton growing within the Empire; the British Cotton Growing Association and its activities.

Cotton growing in Uganda, Nigeria, and the Sudan.

B. *The unlocking of the Tropics by mechanical transport.*

The human being as a carrier; animal transport; river transport.

(1) The importance of railways.

The alternative to the slave carrier.

The development of a "public works" policy.

The creation of a free labour market.

The stimulus to unity.

The stimulus to exports and imports.

Famine relief made possible.

The improvement of health conditions.

The pacification of disturbed countries.

The equalization of prices by reduction in transport costs; interiors obtain new markets.

The training ground of native peoples.

The increase of wealth and of taxable capacity.

Port facilities and shipping.

(2) Government construction and operation of railways in the Tropics.

C. *The Protection and Development of Native Peoples.*

Comparison of the French, Dutch, German, and English attitude towards natives.

The optimistic and the scientific periods.

The protection and development of native peoples involved (*a*) the abolition of slavery and the slave trade, (*b*) agricultural development, (*c*) education, (*d*) health measures.

(1) *The Suppression of Slavery.*

This meant the reconstruction of primitive societies along new lines and involved (i) freeing the slave, (ii) civilizing the native, (iii) supply of free labour.

Slavery occurred (i) by capture, (ii) sale, (iii) birth, (iv) debt.

(*a*) *The Emancipation.*

Britain agreed with other nations to suppress the trade on the high seas, 1815.

Britain emancipated the slaves in Cape Colony, Mauritius, and the West Indies, 1833.

Tried to put down the trade in the interior of Africa as she acquired new lands.

(*b*) *The Effects of the Emancipation.*

Disorganization of sugar production in West Indies.

In South Africa led to Boer trek and to the question of the future relations of black and white.

Abolition of the legal status of slavery: the later method of freeing slaves.

(2) *Reasons for the Persistence of Slavery in Africa.*

Tsetse fly and transport; Sturdy character of the African negro; Currency; The devastating effect of slavery in Africa; 1889 Agreement of nations to suppress trade in the interior; Legal status abolished.

The legal status of slavery abolished in India and Ceylon, 1843; in Malaya from 1884.

(3) *The difficulties of the supply of free labourers.*

The importance of work as an educative factor.

Natives obliged to work to get money for taxation.

Compulsory labour for public works and for settlers; the East African question.

Contract labour.

(4) *Indian and Chinese coolie labour.*

(*a*) *Indian labourers.*

Indentured coolies brought to Mauritius, the West Indies, Ceylon, Assam, Natal, Fiji, and Malaya.

Indian coolies recruited through headmen, through governments, free migration.

Three regions with different problems :—

Ceylon and Malaya : Nature of temporary migration with easy return ; coolies welcomed.

West Indies : Emigration for a considerable period ; settlement ; coolies welcomed.

Africa, East Coast : Racial friction.

Safeguards : Possibility of desertion, protectors of emigrants and immigrants, inspection by Indian Government of coolies in the colonies.

The question in South Africa : The right of Indians to enter. The rights of those already domiciled.

Natal : Indians brought in as indentured coolies, followed by free immigration of traders ; large Indian population in Natal and the Transvaal.

The objection to Indians in South Africa and their exclusion ; the difficulty of the settled Indian.

The question in the Crown Colony of Kenya : its Imperial significance.

Exclusion of Indians in Australia and Canada.

(*b*) *The migration of Chinese.*

The resultant development in Malaya, British Columbia, and Hong-Kong ; Chinese also found in British Guiana, in British North Borneo, and Samoa ; Exclusion on "White Australia" policy and in British Columbia.

PART ONE

THE ECONOMIC DEVELOPMENT OF BRITISH TROPICAL AND SUBTROPICAL REGIONS[1]

THREE factors have been responsible for the economic changes in the British Tropics during the past century. They were the demand of the world for tropical products, the development of mechanical transport, and the policy of the British Government acting through the Secretary for the Colonies or India and the authorities on the spot.

The demands of trade led to the search for increased supplies and new commodities, planters began to grow such products as tea and coffee in ever larger quantities, while traders organized the collection of wild produce such as coco-nuts and rubber, and assisted the production of native staples like rice, oil seeds, raw cotton, and hides for a world market. Thus, as the century developed, the British Tropics became increasingly important as the source of raw materials and foodstuffs.

This growing importance of the Tropics was due mainly to the railway and the steamship, which enabled these staples to reach markets in every part of the globe. The spread of mechanical transport combined with port facilities amounted to nothing less than the unlocking of the Tropics.

The third factor was the attitude of the Government of England, and for the first three-quarters of the nineteenth century this was on the whole *laissez faire*. Thus the economic development of the Tropics was at first left to the traders. This gradually changed. The abolition of the East India Company and the assumption of the direct responsibility for India by Great Britain, in 1858, with the accompanying promise of future development in the Queen's Proclamation, made it impossible for the Govern-

[1] Apart from India, the Colonies, Protectorates, and Mandated Territories comprise an area of about two million square miles and contain a population of over 50 millions. Of these approximately 40 millions are of African race. Nigeria with its 20 millions ranks third in population of all the countries of the Empire, India being first and Great Britain second.—Ormsby Gore, *Economic Conference Report*, Cmd. 2009, p. 55.

ment of India to continue an attitude of *laissez faire*. The years after 1858, therefore, witnessed the era of the great Public Works, which changed the economic structure of India. In the 'nineties, and especially after the advent of Chamberlain to the Colonial Office in 1895, a new policy was outlined for the "undeveloped estates" of the British Tropics, which involved a considerable extension of Government activities, so that the economic prosperity of these regions has come to rest, to a large extent, on the Government. The colonial Governors became in fact the initiators, inspectors, and driving force of nearly all colonial schemes for the economic progress of their colonies.

This is due to the fact that in the Tropics the British Government is an autocrat. Lord Harcourt, when Colonial Secretary, described himself in Parliament as "a despot under democracy". The House of Commons concerns itself very little with either India or the tropical colonies, and therefore "the position of the Colonial Secretary on the Crown Colony side of his Department carries with it the powers, duties, responsibilities, and anxieties of a practical and laborious despot controlled only by the forces of nature, by his own discretion, and by the sporadic curiosity at question time of friends or opponents, inspired either by imagination or information".[1] The result is that when the Colonial Governments say that such and such a thing shall be done, there is no arguing or Parliamentary obstruction to be faced; the thing is done for good or evil. The State in the Tropics is the supreme landowner and the final arbiter of all things economic, and has the opportunity of carrying out whatever policy it may choose to adopt as long as it can get the money to pay for it. Its only check is the Colonial or India Office at home.[2]

The first duty of the State in the British Tropics was to keep peace and order, and for this transport facilities were

[1] Speech by Mr. Harcourt on Colonial Estimates, *Hansard*, 12th June, 1912.

[2] The following comment made in 1896 by Sir F. Swettenham (*J.R. Col. Institute*, vol. xxvii, p. 297) is of interest: "It is a curious fact that, so far as I know, Crown Colonies hardly ever produce rich colonists, while the constitutionally governed Colonies can tell them by hundreds and thousands. I believe the reason is that in Crown Colonies there is a narrowness and want of liberality in the treatment of *bona fide* commercial undertakings, that make it impossible to obtain much success, and in consequence the capital, the energy, and the brains go elsewhere."

essential as soon as inland penetration took place. Prior to that the coastal districts could be policed by a navy. Therefore the Government very soon became a road maker, a railway builder, and a constructor of ports. "Public Works" began in the latter half of the nineteenth century to occupy a prominent place in all Colonial Government policy and finance, especially in the continental areas. These developments meant new openings for trade. England supplied railway material, drain pipes, and harbour equipment. The penetration of the railway created new employments and brought new goods into the market. Thus the Government policy, railway development, and the growth of trade reacted on one another.

After the maintenance of order, the next big task which the British Government had to face was the protection of the native. To free the slave meant the reconstruction of the whole of the economic bases of tropical societies, all of which rested on some form of slavery or serfdom. But no effective freeing of slaves could be carried out unless there were alternative modes of transport to the slave carrier, or a free labour market where employers could hire workers instead of slaves. This could only be provided by railways which created personal mobility and a certain fluidity of labour and provided in the railway train a cheaper and better method of land carriage than the human being. Thus railways and the abolition of slavery were inextricably intermixed.

The improvements of the methods of sea transport led to the migration of Indians and Chinese to fill the gap left by the abolition of slavery, and here again the Government had to step in and regulate the passage and terms of hiring.

Having freed the slave, it had to face the problem of training native free peoples, and as their prosperity rested on agriculture, the Government had to concern itself not merely with land tenures, irrigation, and famine relief, but with rent-fixing, money-lending, and agricultural co-operation. Its functions were enlarged towards the end of the century by the new possibilities of scientific agriculture and the application of the new knowledge as regards health. As the growing functions of the Government rest ultimately on the ability of the country to pay for the services rendered, finance began to assume an ever increasing importance. The tendency has been for the trader to pioneer economic

development either in the form of a joint stock or other company and for the Colonial Government to assume more and more responsibility for the economic development of the British Tropics. Starting from the basis of keeping law and order while the planter and trader organized the production and distribution, the Governments have themselves become to an increasing extent interested in both functions.

Some idea of the enormously wide functions of the Government in British tropical areas may be gathered from the following account of the functions of the Government of India, given to the Decentralization Commission [1] :—

"The Government claims a share in the produce of the land, and save where, as in Bengal, it has commuted this into a fixed land tax, it exercises the right of periodical re-assessment of the cash value of its share. In connexion with its revenue assessments it has instituted a detailed cadastral survey and a record of rights in the land. Where its assessments are made upon large landholders, it intervenes to prevent their levying excessive rents from their tenants; and in the Central Provinces it even takes an active share in the original assessment of landlords' rents. In the Punjab and some other tracts it has restricted the alienation of land by agriculturists to non-agriculturists. It undertakes the management of landed estates when the proprietor is disqualified from attending to them by age, sex, or infirmity, or occasionally by pecuniary embarrassment. In times of famine it undertakes relief works and other remedial measures upon an extensive scale.

"It manages a vast forest property, and is a large manufacturer of salt and opium. It owns the bulk of the railways in the country, and directly manages a considerable portion of them; and it has constructed and maintains most of the important irrigation works. It owns and manages the postal and telegraph systems. It has the monopoly of note issue, and it alone can set the mints in motion. It acts for the most part as its own banker, and it occasionally makes temporary loans to presidency banks in times of financial stringency. With the co-operation of the Secretary of State it regulates the discharge of the balance of trade as between India and the outside world through the action of the India Council's

[1] *Cd.* 4360 of 1909, pp. 12–13.

drawings. It lends money to municipalities, rural boards, and agriculturists, and occasionally to the owners of historic estates.

"It exercises strict control over the sale of liquor and intoxicating drugs, not merely the prevention of unlicensed sale, but by granting licenses for short periods only and subject to special fees which are usually determined by auction. In India, moreover, the direct responsibilities of the Government in respect of police, education, medical and sanitary operations, and ordinary public works are of much wider scope than in the United Kingdom."

The demand for commodities, the provision of transport, and the abolition of slavery, with the subsequent development of a native policy, have transformed the British Tropics in the past century and a half.

The Effect of New Cultures and New Demands on the Tropical Colonies

Of the British possessions in the East and West Indies in the eighteenth century, the latter had been the more important from the trade point of view.[1] In the nineteenth century, while the Indian outposts steadily developed into continental areas and assumed an ever-growing commercial importance, the West Indies declined until the revenues ceased to meet the expenditure and grants in aid were of almost annual occurrence.[2] In 1897 their position seemed almost hopeless.

Other tropical possessions, however, rose in importance. In the first half of last century Ceylon became the favourite tropical region, outside India, for British investors. The staple product of this island had been cinnamon, but the economic character of the island was changed when

[1] The list of values of exports and imports from the colonies and foreign countries and to Great Britain between 1689 and 1772 is given by Sir Charles Whitworth in *The State of Great Britain in its Imports and Exports*, 1776. Taking two typical peace years :—

		Imports into Great Britain from £	*Exports from Great Britain to* £	*Total.* £
1750–1	W. Indies	1,446,072	631,036	2,077,108
	E. India	1,096,837	798,077	1,894,914
1770–1	W. Indies	2,716,565	1,141,353	3,857,918
	E. India	1,882,139	1,184,824	3,066,963

[2] For causes, see pp. 79–80.

the first British plantation in the East was begun by the Governor at Peradeniya in Ceylon in 1824.[1] A great boom took place in the island at the end of the 'thirties. Labour was easily obtained from Southern India, and coffee offered good prospects of profit as the duty had been reduced in England in consequence of the free trade movement. In one year alone, 1838, the Crown lands sold to planters amounted to 10,401 acres. In the year 1841 no less than 78,685 acres were alienated.[2]

"The Governor and the Council, the military, the judges, the clergy, and one-half the Ceylon civil servants penetrated the hills and became purchasers of Crown lands . . . Capitalists from England arrived by every packet."[3] So dazzling was the prospect that the rush for land was equivalent to that of a gold-mining boom. In 1869, two years after the opening of the railway from Colombo to Kandy, the area under coffee reached 176,000 acres, and the value of the crop was estimated at £4 millions sterling. During the next ten years another 100,000 acres were added.

After the boom had subsided, coffee planting developed steadily, and up to 1882 was the staple export industry. In 1869 the coffee plant was attacked by a fungus, and by 1880 coffee planting was doomed. The coffee area sunk to 5,000 acres. The planters then turned their attention to quinine. This culture was profitable until the canker disease and the increasing production of quinine in Java and India brought down the price to unremunerative levels,[4] i.e. it dropped from 12*s.* an ounce to 1*s.* The planters then took up tea,[5] and in the twentieth century added rubber, the plants having been sent out from Kew in 1876. Cocoa was grown after 1878 with increasing success. Cardamon seeds, cinnamon, and other spices are also planted. The largest area of land in the island is now devoted to coco-nut growing, which is mainly a native and not a foreign planter's culture, though much of it is carried on on large plantations.

[1] Willis, *Ceylon*, p. 83.
[2] Willis, *Tropical Agriculture*, p. 181.
[3] Ib., quoting Tennent.
[4] The export of the bark shows the remarkable vicissitudes :—

1872	11,547 lb.	
1887	15,892,078 ,,	
1892	500,000 ,,	*Bruce*, ii, p. 135.

[5] In 1875 barely 1,000 acres were planted with tea. By 1893, 305,000. The export in 1910–11 was 183,905,153 lb. of which 108,356,360 went to the United Kingdom.—*Willis*, p. 60.

The first cargo of coco-nut oil was shipped from Ceylon to Europe in 1818, but the real development started in the 'sixties, when planting took place and mills on a large scale were established at Colombo for expressing the oil. The coco-nut industry not merely supplies copra, but also oil, fibre, desiccated coco-nut for confectionery, and crushed cake for stock feeding. Coco-nut growing in its various forms provided work as well as food for a large number of natives, the Sinhalese in particular. In this way the demand for fats and oils in England created a new marketable product in Ceylon.[1]

India began to develop a considerable export of new tropical products after 1833. As early as 1812 the English, cut off from the cotton supplies of the United States by the war, began to look to India for raw cotton. After 1833 new products gave India a new economic value. Tea was started, and the first shipment from Assam reached England in 1838, though it was not an important export till the decade 1850–60. The problem of the successful spinning of jute was solved in Dundee in 1833, after many trials, and jute obtained a new value and its export increased rapidly. Then the demand for oil seeds, rape, sesamum, castor oil, ground nut, and cotton seed all increased the exports of India. Indigo was required in ever larger amounts for dyeing the growing output of cotton and woollen cloth in the world. In the latter case it was in great demand for uniforms for the Navy, the East India Company's servants, and for the new police in England. Coffee was grown in Mysore and in 1861–5 the Civil War in the United States and the consequent Lancashire cotton famine created a veritable cotton boom in India. The quality of the cotton produced was not good because the seed got so mixed and the cotton was short stapled, but, bad as it was, it commanded record prices. Hides, too, were increasingly furnished in response to the ever-growing demand for leather for boots, shoes, furniture, leather belting, harness, and similar purposes.

Indeed, between 1833 and 1890 the bulk of the important tropical products which were produced within the Empire were furnished by India.

After 1870 wheat was exported from India in the years of good monsoons, while Lower Burma and Bengal had developed a considerable export trade in paddy, i.e.

[1] "Ceylon," Ferguson, *J. R. Soc. Arts*, vol. lvii, 1909, p. 449.

unhusked rice, by the 'thirties, according to the Committee of Inquiry of 1831.

The Federated Malay States were the next tropical regions in point of time to attain to economic importance, and their prosperity reacted upon and stimulated the older Straits Settlements. Tin had been worked by the Chinese in the Malay States throughout the century, but the mining industry expanded enormously after the British assumed control in 1874 and began to provide increased facilities for transport.[1] In 1882 a French company started tin mining and was followed by English companies with English engineers. The growing demand for tin for the tin-plate industry, which rapidly developed in the 'seventies with the growth of canned foods, also operated to develop these new sources of supply in Malaya. So greatly did the roads and railways assist the tin mining industry, that while the price of tin fell from £90 to £63 per ton in two years, the miners could still work profitably and turn over ground in 1908 that ten or fifteen years before would have been regarded as unpayable.[2] Singapore possessed in consequence the largest tin smelting works in the world.

Plantations of sugar, coffee, and coco-nuts began to develop, but they were all ousted by rubber when the great demand for tyres was created by the bicycle and the motor-car. Rubber was successfully grown in the Government Gardens of Perak and Singapore in the 'eighties,[3] and began to form the basis of a new planting industry at the end of the 'nineties. In 1905 one ton of rubber was exported from British Malaya, in 1907 the figure had risen to 885 tons, in 1917 to 79,831 tons.[4] By 1921 over half the rubber of the world came from Malaya,[5] and there was an overproduction which prevented remunerative prices.

Coco-nuts also became a second great agricultural staple in

[1] All the States depended for their revenue upon the tin mines, and it was of the first importance to provide regulations to govern the mining industry and to supply the miners with means of transport in the shape of roads or navigable rivers.

Many otherwise navigable streams were rendered impassable by great forest trees falling across them, and by the bed of the stream being blocked by the accumulated timber of ages. Such rivers were cleared at considerable expense and kept free of timber by working parties until other and better means of transport were provided.—Swettenham, *Malaya*, p. 228.

[2] Swettenham, op. cit., p. 295.

[3] Sir F. Swettenham, *Malaya*, p. 262.

[4] Willis, *Tropical Agriculture*, p. 124.

[5] For note 5 see next page.

this region, again showing how the demand for edible oils and fats was reacting on the British Tropics.

Then Tropical Africa began to come into its own. Livingstone was sent into Zambesia, including the country now Nyasaland, in 1865, to see if cotton could be grown there in order that the British might not have to rely so largely on slave-grown cotton from the United States. Transport proved to be an insuperable difficulty at the time, but the African Lakes Company was formed, the object of which was to put down the slave trade and develop alternative commodities to slaves.[1] Coffee was started in Nyasaland in 1883, and was reinforced later by tobacco, tea, and cotton. The British East African Association obtained concessions in 1887–8 from the Sultan of Zanzibar, and formed the Imperial British East Africa Company. They explored inland and reached Uganda. The cloves of Zanzibar and the coco-nut laid the foundation of the economic importance of the East coast of Africa. This has now been increased by the production of coffee, flax, and sisal hemp, a plant only introduced into British East Africa in 1907, the fibre of which is used for cordage. Sisal was also extensively grown in German East Africa, where it was brought from Mexico in 1893.[2] Thus the sisal hemp resources of the Empire have been increased by the mandate for Tanganyika.

West Africa, too, developed rapidly in economic importance in the 'nineties when cocoa from the Gold Coast, ground nuts from Gambia, palm oil and palm kernels from Sierra Leone and Nigeria became of increasing importance and railways and steamships were able to carry the produce cheaply. As the West Coast is difficult of access owing to the surf, the building and deepening of harbours was also necessary to bring this region into economic relationship with its markets.

After 1897 the West Indies began a new era of prosperity.

[5] See p. 85. The actual production of crude rubber in 1920 and 1921 was as follows:

	Plantation.	*Wild.*	*Total.*
	tons.	tons.	tons.
1920	335,000	35,000	370,000
1921	260,000	22,000	282,000

Cmd. 1678 (1922), Rubber situation in British Colonies and Protectorates.

[1] Sir H. Johnson, *J.R. Soc. Arts*, 17th Dec., 1909, p. 97. *The Agricultural Development of Nyasaland*, Simpson.

[2] *Handbook of Kenya Colony and Protectorate*, prepared by the Naval Intelligence Department of the Admiralty, 1920, p. 415.

A Royal Commission was sent out to see if anything could save the islands. As a result of its recommendation, a new departure was made in Imperial policy. An Imperial Department of Agriculture, subsidized by Great Britain, was set up in the islands to see what could be effected by scientific methods. Meanwhile, England abandoned pure free trade in that she stopped the continental sugar bounties by prohibiting the import of sugar from bounty-giving countries in 1903. She also departed from her *laissez faire* policy when she agreed to contribute half towards an annual subsidy of £40,000 to a steamship line to develop the fruit industry of the islands by providing regular, rapid, and cheap transport for fruit. Thus the rescue of the West Indies proved to be a turning-point in British commercial history. The colonial factor began to count and modify British free trade.

After 1897 Canada embarked on a tariff war with Germany who had resented the preferences given by the Dominion to Great Britain in 1897. This resulted in penalizing German beet sugar and gave a chance to West Indian sugar to gain the Canadian market.

The abolition of the European bounties, coinciding with the opening of the new Canadian market, gave the Imperial Department of Agriculture in the West Indies a favourable atmosphere in which to work. Planters eagerly consulted the agricultural officers, and took advantage of the experiments. There was an output of energy and mental alertness in agricultural matters; a desire to develop new lines and to exploit new fields replaced the former indifference. The sugar cultivation was improved from new varieties of cane which yielded 10–25 per cent more sugar, new cultures such as cotton were introduced, cocoa growing was enormously extended, the lime industry increased in Domenica, and rice was produced in considerable quantities and even exported from British Guiana. The fruit trade also developed with the United States.[1] The islands no longer had all their eggs in one basket.[2]

[1] The export of Jamaican fruit increased from £140,000 in value in 1880 to £1,142,765 in 1910.

[2]

	1899	1911
	Million Pounds Sterling.	
Exports . .	5·6	7·1
of which .		
Sugar . .	3·2	3·0
Other . .	1·3	4·1

Quoted by Sir D. Morris in his paper on "The Imperial Department", read before the Royal Colonial Institute, *United Empire*, 1911.

The Department undertook experiments in plant breeding, the combating of insect and fungoid pests, agricultural education from elementary schools upwards, the encouragement of co-operation, land settlement and marketing. An annual expenditure by the British Government of £17,400 helped to rescue the West Indies from bankruptcy, and by 1911 the islands enjoyed surplus revenues and no longer needed support from the United Kingdom.[1] So successful was this new departure that agricultural departments working on much the same lines were set up in India, the Federated Malay States, Nigeria, Gold Coast, British East Africa, and Egypt. All British tropical agriculture was stimulated. A new college to train men for tropical agriculture throughout the Empire was started in Trinidad in 1923. The growing value of the West Indies was fully realized by the United States.[2]

The resuscitation of Jamaica was, however, due to the banana, and that trade was largely developed by the Boston Fruit Company after 1895, known later as the United Fruit Company.[3] The older economy of Jamaica, like that of most of the West Indian islands, had rested on sugar which was grown in the alluvial plains, the mountainous limestone interior being kept as a sort of annex for the horse and cattle-breeding activities of the plantations of the plains. It was in the mountainous regions that the ex-slaves settled, and they, supplemented with the imported coolies, constituted the labour supply of the sugar plantations. With the slump in the sugar estates between 1870–80, when beet

[1] The profit on one estate in Demerara from using the new seedling canes more than covered the whole cost of the experiments in Barbados over 26 years.

[2] "Many persons do not realize fully the importance of the West Indies as a market for American goods. The position of the Archipelago in the foreign trade of the United States of America may be best illustrated by comparisons with other fields. In the fiscal year 1916 this country sold to the West Indies, including Porto Rico, more goods than to the entire continent of South America . . . China is rightly regarded as one of the principal fields for commercial effort by American exporters, yet in the fiscal year 1916 the great Oriental republic with its four hundred million people purchased from the United States of America less than one-seventh as much as was taken by the islands of the Antilles . . . They took about four and one-half times as much as the entire continent of Africa."—"The West Indies as an Export Field": *Dept. of Commerce U.S.A. Special Agents' Series*, No. 141, 1917, p. 9.

[3] This account is taken from a paper read to the Society of Arts, 17th December, 1915, by Sir S. Olivier, *Recent Developments in Jamaica*, vol. lxiv. p. 79.

sugar dominated the market, many of these labourers emigrated to build the Panama Canal, about 40,000–50,000 being employed there. When the United Fruit Company extended its operations to Costa Rica, the Jamaican labour, released from canal building, migrated there and developed the banana industry. Many of these negroes who afterwards returned to Jamaica had money and took up banana planting in the hills. There has thus emerged in Jamaica a class of well-to-do small planters, negro and white, working largely for the American market under the great fruit company and cultivating bananas in both the plains and the interior. The importance of the development of the Costa Rican trade was that the produce of both Jamaica and Costa Rica together supply sufficient cargo to enable a regular shipping fleet to be instituted. The difficulties the Elder Dempster line encountered in getting full cargoes of bananas from Jamaica were so insuperable that it had to join hands with the United Fruit Company. The fruit trade with the United States was so well organized that the British-Jamaica subsidy to shipping did not avail to break the monopoly of the American Company, and although bananas were introduced into England and became a common article of consumption, the carrying of them in English ships did not pay.[1] After ten years the subsidy was accordingly dropped. With the spread of the banana the horse and cattle-breeding of the interior has been given up, and the prosperity of the island has come to rest on this main staple and the American market.[2] Although the economic position of Honduras has in the past rested mainly on mahogany, such cultivation as exists consists of bananas, and is carried on for the United Fruit Company.

[1] Olivier, op. cit., "The development of banana cultivation round the coasts of Central America with American capital and Jamaican labour is really a very remarkable feature more especially when it is understood that the United Fruit Company which has created the development practically controls the whole trade and shipping facilities of all that sea and its coasts and in the districts where it cultivates is to all intents and purposes the Government of the country."

[2] Olivier, op. cit., pp. 85–6.

In 1885, no land was returned as under bananas.
„ 1895, 18,528 acres.
„ 1905, 44,325 „
„ 1915, 85,854 „

The banana suffered a good deal from hurricanes, especially that of 1903. The area under coco-nuts also doubled, rising from 10,395 acres in 1895 to 29,731 in 1915. Cocoa increased from 4,628 acres (1895) to 11,088 (1915), while sugar declined from the 40,425 acres of 1885 to 23,871 acres in 1905, reviving in 1915 to 31,727 acres.

The possibility of a shortage of raw cotton led in both the nineteenth and twentieth centuries to attempts to develop cotton-growing within the Empire and no single factor has been of greater importance in the development of India and the native colonies.

A rise in the price of raw cotton took place in 1846–7. The export duty on Indian raw cotton was repealed in 1847, and a committee was held in 1848, under the chairmanship of John Bright, to see if the anticipated shortage of cotton from the United States could be met by fresh extensions in cotton-growing in India. Inquiries were also addressed to the Governors of the West Indies and British Guiana, Natal, and Australia as to the possibilities of cotton production in those regions. Petitions were even sent to Parliament from Glasgow and Manchester asking that the unemployed should be sent to Australia and Natal to grow raw cotton, as it was so much needed by the industry at home. We have already seen how the shortage directed attention to Central Africa.

In 1848 the difficulty of all agricultural development in India was the lack of communications. The cost of transport from Central India, the great cotton area, was practically prohibitive of a large export although it was said that at that date India produced more cotton than the United States. But the possibility of development of a raw cotton supply in India was never lost sight of. The question became urgent with the Lancashire cotton famine caused by the American Civil War, and strenuous efforts were made to develop supplies in India. By this time, 1861–5, the railway net was being extended, and furnished the necessary cheap transport, with the result that the cotton export expanded rapidly. Indian cotton is, however, short stapled, and is not suitable for the finer type of cotton goods, which is Lancashire's speciality.[1]

Cotton was introduced into Egypt by Mehemet Ali in the first quarter of last century.[2] Egyptian cotton-growing received an enormous impetus from the cotton famine of the 'sixties. It became of still greater importance

[1] The early interest in cotton-growing in India may be judged from the following committees and reports: 1848 vol. ix, 1852–3 lxix, 1857 xxxi, 1863 xliv. During the Lancashire cotton famine prayer meetings were held to bring the urgency of fresh cotton supplies to the special notice of the Almighty. In the middle of a fervent prayer for raw cotton a voice was heard groaning "Yea, Lord, Yea, Lord, but please not Surats".

[2] Todd, *World's Cotton Crops.*

in the 'nineties, when the Lancashire cotton industry began to spin finer yarns and produced new varieties of cotton goods, as Egyptian cotton is long stapled and is for many purposes as good as American cotton. For some purposes it was even better, as it was for a time the only cotton that could be mercerized, i.e. that would take the satin-like sheen that made mercerized goods so popular. Thus Egypt, which had become a central highway of the British Empire when the Suez Canal was opened in 1869, acquired a new value as the most important source of good quality raw cotton under British control.

In the twentieth century British industry seemed to be threatened with another cotton famine. The ravages of the boll weevil and the boll worm destroyed a large part of the crop at the same time that there was an enormously increased demand for cotton fabrics owing to more artistic methods of printing the fabrics and the lighter varieties produced. Motor tyres were also made with the finest counts of cotton and increased the demand for long-stapled lint. There seemed to be every prospect that the United States would increasingly use up her own raw cotton supplies and therefore fresh efforts were made to develop cotton-growing within the Empire.[1] The British Cotton-Growing Association was formed in 1902 and disbursed £500,000 without receiving any monetary return for their outlay.[2] Their first idea was to grow cotton on large plantations, but it was soon given up in favour of cotton-growing by natives on small holdings. This necessitated a supply of good seed, the establishment of buying stations, ginning and baling factories, and the advance of funds for financing and handling the crop. The Association also undertook to sell the cotton raised and to insure it. They brought pressure to bear in order to get railways built. They also made experiments. They proved that cotton-growing in Gambia was a failure because the natives preferred to grow ground nuts. In Sierra Leone the rainfall was too heavy, in the Gold Coast cocoa was so

[1] "There is no doubt about the shortage of cotton . . . Since July, 1917, the situation has become decidedly worse. Owing in part to the necessity for growing more foodstuffs to meet the needs of the war, the cotton crops in the United States, in Egypt, and in India have been curtailed. The advent of peace has in no way improved the situation . . . and there is no prospect whatever of there being a full supply of cotton for some years to come. Prices of cotton are already at levels far in excess of anything recorded since the cotton famine of the 'sixties." *Empire Cotton Growing Committee, Cmd.* 523.

[2] Ib., pp. 53–4.

popular that again cotton had no chance.[1] In 1910 the Imperial Government gave £10,000 a year for three years towards experimental cotton-growing within the Empire.[2] The Colonial Governments also contributed. Efforts were made after 1905 to stimulate a better type and better methods of cultivation of cotton in India, the yield being only 75 lb. of cotton to the acre while in the United States the average was about 195 lb., while the value of Indian cotton was less by 20 per cent per lb. A special committee was appointed in 1917 to investigate the reasons and suggest remedies. India has an exportation surplus of 1½ million bales, of which about two-thirds to three-quarters is at present taken by Japan.

The attempt to obtain further supplies within the Empire led to a revival of sea-island cotton in the West Indies in 1903. This is a long-stapled variety invaluable for the finest fabrics.

Although cotton was unknown in Uganda till the twentieth century—only fifty-four bales were exported in 1904—it then developed rapidly, 4,000 bales being the figure for 1908, and 20,000 for 1911. By 1923 the total of 90,000 bales was reached, and the crop for 1924 is estimated at 120,000 bales. It is a good quality cotton. Nigeria, especially the northern parts, offer one of the best fields for cotton production on a large scale outside India, and the country gained an added importance with the possibilities of a cultivated crop instead of relying on forest produce like palm fruit, which may be rendered unprofitable by the cultivation of the palm oil tree on large plantations.[3] The eleven bales marketed from Northern Nigeria in 1914 had become 7,000 bales by 1921, and from both provinces 31,500 bales were exported.[4]

The Sudan promises to become the great cotton-growing area of the Empire; the 12,000 bales produced in 1918[5] had become 35,000 bales of superior Sakellarides cotton and 7,500 of long-stapled American by 1924, i.e. 42,500 bales.[6]

The difficulties of a shortage of labour owing to the

[1] "Effects of the War on Cotton Growing": *Journal Society of Arts*, 28th Jan., 1916, p. 206.

[2] *Cd.* 5215 (1910), Government action in Cotton Growing Colonies.

[3] 15,000 bales of long-stapled cotton were expected from N. Nigeria alone in 1924. *Tropical Agriculture*, Feb. 1924, p. 23.

[4] United Empire, 1923, Sir J. Currie, *Cotton Growing within the Empire*, p. 161.

[5] *Cmd.* 523, p. 26.

[6] *Trop. Ag.*, p. 23.

reduction of population under Dervish rule and the shortage of water are both being overcome, the former by the natural increase of population, which has doubled under peace conditions, and the latter by irrigation. A company was formed to grow cotton, the Sudan Plantations, Ltd., the Government provided the irrigation works, and arranged to take 35 per cent of the profit. The company takes 25 per cent and the cultivator gets 40 per cent.[1] This is an interesting example of three factors combining—English capital, peasant cultivators, and Government through public works. Nyasaland and Tanganyika are already cotton-producing countries, Zululand is said to have great possibilities in this direction and a railway is under construction to develop this region. Although by far the larger part of the cotton required by Lancashire is still produced outside the Empire, yet cotton has been a most important agency in Imperial development.

The Cotton Committee appointed to inquire into the development of cotton-growing within the Empire became a permanent body, entitled "The Empire Cotton-Growing Corporation", and was empowered in 1923 to levy 6*d*. on each bale of cotton purchased by spinners in this country to be devoted to cotton-growing within the Empire. Thus the supply of raw cotton has become to some extent an affair of the British Government.

A further problem is likely to arise, now that Lancashire cotton spinners are being thus taxed to further Empire cotton-production, and that is whether the cotton shall be allowed to go elsewhere, i.e. is Uganda cotton to go freely to India to create there a competition for Lancashire, already suffering from a cotton shortage? Is the British Government to guarantee money to be spent in the Sudan

[1] Sir Lee Stack, the Governor of the Sudan, speaking in Manchester in October, 1923, outlined vast schemes for cotton-growing in the Sudan. Over three million acres, he said, would soon be made available with irrigation (i.e. an area equal to all the Midland counties of England). A yield of a million bales was expected in fifteen years. The Sudan Government was taking up the question of cotton-growing on experimental farms. *Times*, 3rd Oct., 1923. Some idea of the difficulties to be overcome were given in a report of the Kassala Cotton Company. "The work this season has been subject to many handicaps; drinking water for all the labour on canal digging has had to be carried on camels for increasing distances as the season advanced. Local labour suitable for the heavy work of canal digging is scarce, so it has been necessary to bring up from Egypt 500 Egyptian labourers, and they, as well as all cement, tools, etc., have had to be transported by camel for more than 200 miles from the railway. Our staff are still living in grass huts." *Times*, 8th May, 1924.

to increase the supplies of the United States of America or Japan?

The importance of cotton-growing lies in the fact that it involves transport facilities. "The history of the development in Nigeria of cotton-growing for export is practically the history of the development of transport."[1] Cotton also means a certain amount of industrial development in that gins and presses have to be provided, the staff of scientific departments are increased to deal with the cotton problem, natives who grow cotton must sell it to buy food, and therefore trade increases.

The interesting factor is that whereas cotton was formerly grown in the United States in large plantations before the Civil War, the new Empire cotton-growing is a peasants' crop, except in Nyasaland, where it is grown on large plantations, but even here there is also a native industry of cotton-growing. The production of a new peasant crop needs, as a rule, considerable supervision by the Government.[2] At Tokar in the Sudan, "the seed supply is entirely in the hands of the Government, which also insists that all inferior cottons are weeded out of the growing crop. The harvesting of the crop is subject to Government inspection to secure clean picking, and the crop passes through Government markets, where the Government classifier grades it into four classes."[3]

In every tropical colony under British rule where cotton is grown it has proved to be a great factor in stimulating transport and exchange. The Assistant Bishop of Uganda gave the following impression of the importance of cotton-growing to the Sudan and Uganda: "I have myself

[1] *Cmd.*, op. cit., p. 39. "The limiting factor, however, in the development of cotton-growing in North Charterland, as in so many parts of Africa, is the provision of transport" (p. 35). "The main difficulty of the Tokar district is the cost of transport. At present the whole crop must be carried about 20 miles by camel to the port of Trinkitat, thence by small native sailing boats to Suakin or Port Sudan" (p. 26).

[2] "The cotton-growing districts of the United States are entirely subtropical. The cotton plant there is an annual which is killed by the frosts of winter. The death of the cotton plant destroys insect and fungoid pests or at least limits their survival. In the Tropics, however, where there are practically no frosts, it is essential, according to our present knowledge, to fix arbitrarily a period during which the cotton plant shall not be in existence, in other words it is necessary to secure the destruction of the old plants. This, of course, can only be done by regulations made and enforced under Government authority." *Report of the Empire Cotton-Growing Committee*, 1920, *Cmd.* 523, p. 10.

[3] *Cmd.* p. 26.

motored mile after mile through growing cotton in Uganda, to see the jungle transformed, to see the desert (literally) blossoming as the rose, for the pink and primrose flower on the cotton shrub gives strangely the effect of a rose-garden. And last time I came through Teso it was to be actually held up by the crowds bearing the white cotton-lint on their glossy black shoulders to the nearest ginnery or store . . . From the Imperial point of view, the outlook is stimulating. From the native point of view, I must confess, it is even more so . . . Instead of lying idle, the rich soil is to be under his culture a field for enterprise, peculiarly suited to his habits, growing produce for which there is always a market, and drawing out of him just those qualities of diligence and intelligence which will conduce most to the development of his moral character . . . It is a new world of self-respect, of hope, of co-operation with the forces of progress. The chief swings past on his bicycle or even in his car, his cotton rupees pay for his son's schooling at a good school; even the peasant protected and encouraged has his share in the new agriculture." [1]

Thus new tropical areas have successively come into prominence during the nineteenth century, raising in their turn in each region the modern questions of the economic organization and development of the Tropics.

Unlike the regions of European expansion, the development of the British Tropics has owed little to the exploitation of their mineral resources. Gold was the effective starting-point of Australia, South Africa, British Columbia, and New Zealand. It attracted miners, the mining camps had to be fed, agriculture developed, and railways were laid down.

[1] *United Empire*, 1924, pp. 295–6. "There can be no doubt that the growing of cotton is beneficial to those countries for which it is suitable. In Egypt cotton and cotton seed form 90% of the exports of the country. In the Sudan cotton is already more than 10% of the exports and in Uganda nearly 70%. In the West Indian islands cotton forms over 30% of the total exports of St. Vincent, Montserrat, and the Virgin islands, and is an important factor in St. Kitts, Nevis, and Barbados. In a memorandum sent to the Colonial Office by the British Cotton-Growing Association on 15th December, 1915, it was stated that the Government Revenues of the Colonies and Protectorates where the Association was operating were benefiting to the extent of over £130,000 per annum in direct consequence of the cultivation of cotton." *Cmd.* p. 53. The steamships benefited to the extent of £100,000 a year in new freight and the insurance companies and bankers also gained. "We are creating an absolutely new trade and enabling the natives to produce an article for export in those districts where an export trade was previously impossible." "Effect of the War on Cotton-growing": *J. Soc. Arts*, 1916, p. 219.

The tropical colonies, on the contrary, have been built up on the wonderful resources of rich tropical vegetation. The great exceptions were Malaya, Rhodesia, and Upper Burma. Before it reached the plantation stage in the 'nineties Malaya had depended on its tin as its mainstay. The economic development of Rhodesia was largely due to its mineral wealth. Gold was found, people were also found who were willing to subscribe millions towards the development of a "second Rand", mining camps grew up, they furnished an excellent market to agricultural settlers, and the demands of the mines for the carriage of the machinery and the ore produced railways.

The discovery of the large copper fields of Katanga on the Congo borders of Rhodesia had much the same effect as if the deposits had actually been found in Rhodesia. They stimulated the northward trend of the railway, gave a much needed market to Rhodesia, and were one of the main causes of the development of the Wankie coalfields in Rhodesia itself. Coal not merely provided fuel for the railway, but its carriage increased the prosperity of the Rhodesian railway systems.

Mineral oil had important effects in stimulating the trade of Upper Burma. The development of the oilfields began on a big scale in 1891, through the agency of the Burma Oil Company, and new oilfields were successively opened up. The annual production of crude oil rose from a little under 100,000 metric tons in 1898 to a little over 900,000 in 1908.[1]

Timber, which has played so large a part in the economic history of Canada, is almost negligible as a developing factor in the Tropics as yet, because the demand of the world is for soft wood from the coniferous variety of tree, and the Tropics produce the broad-leaved hardwoods. Mahogany from Honduras and teak from Burma have been the only two important commerical timbers from the Tropics. The timber resources of British Guiana, Malaya, and Southern Nigeria, to say nothing of India, are very great, and with the growing exhaustion of the pine, resort will no doubt be had to the hardwood varieties and to bamboos for cheaper paper pulp. In the past, however, timber has played but a small part in the commerical development of the Tropics.[2]

[1] Sir T. Holland, "Trend of Mineral Development in India": *J.R.S. Arts*, 1911, p. 642.

[2] "Forestry Report, Imperial Conference," *Cmd.* 2009, p. 545.

The Unlocking of the Tropics by Mechanical Transport

Historically speaking, the maintenance of order and the abolition of slavery were the first tasks confronting Great Britain in the Tropics. But the proclamation of personal freedom would have had very little effect unless there was something for the ex-slaves to do when they were free. As slaves they were at least fed and clothed. Free they were apt to become thieves or starve unless they could obtain land. Employers who were deprived of slave labour were apt to get their men into their hands again by some form of credit advance which rendered their actual position very much the same as when they were slaves. Some alternative employment and the creation of a free labour market were the two necessities if personal freedom was to become a reality. Thus until the railways developed and provided an alternative employment and created a supply of labour which could be hired for other purposes, slavery was likely to continue, as it actually did in both Africa and India, although officially unrecognized. Moreover, as slaves were so valuable as carriers, slave-raiding to provide more carriers had a definite economic value until a superior form of transport was provided. Eventually slavery and mechanical transport were ultimately intertwined. So, too, the agricultural possibilities of the Tropics hinged on transport. It was no use producing large quantities for inland consumption or for export if they could not be transferred at prices that would tempt the consumer and pay the grower. The economic history of India in the first half of the nineteenth century brings this out clearly. The various commissions that sat to devise methods of developing Indian resources, especially cotton, all reported that the possibilities were there, but the transport was deficient, and that without transport there could be no development. It was the same tale in 1858, when a commission sat to investigate the possibility of English settlement in India. Security could not be promised without the railroads on which to move troops, and a market could not be obtained without transport.

Roads and railways imply docks and wharves, and once the railways start, the great era of " public works ", which transforms a colony, begins. Its railways are the development point in any tropical colony that is not an island of small dimensions. In the history of the Tropics, transport

questions take precedence of all others, since all other economic questions ultimately revolve round transport.

Cheap and easy transport is, of all necessities, perhaps the most vital for the purposes of keeping order, for disposing of the produce, for sparing the labour supply from porterage, for productive purposes, and for relieving famine. In the first stages of development goods are usually carried by human beings. Then draught animals succeed, and this necessitates a wider path than that used by man. In this stage there are the makings of a road, which may often be only a bridle-path but which is larger than the forest paths. As the surface becomes hard, carts may be used, the track is enlarged, and there follows in course of time the metalled road. Boats of sorts are, of course, used on rivers and waterways when practicable. Animals vary enormously in the loads they can be induced to carry and in their tractability for porterage, but they are superior to man for transport purposes. Of the transport mule much has been written and much more has been said—most of it unprintable. As for the East African carrier, the late Sir Gerald Portal said the last word about him a full quarter of a century ago. "As an animal of burden," he wrote, "man is out and out the worst. He eats more, carries less, is more liable to sickness, gets over less ground, is more expensive, more troublesome, and in every way less satisfactory than the meanest four-footed creature that can be trained, induced, or forced to carry a load."[1] In a large part of Africa, where tsetse fly and other pests kill draught animals, to get goods moved it is, however, man or nothing.[2] Donkeys, which do not respond to the trypanosome introduced by the tsetse fly, are especially palatable to lions.

River transport is peculiarly difficult in Africa, because of the rapids, which bar the way into the interior, and many

[1] Sir H. Clifford, *Gold Coast Regiment*, p. 151.

[2] The absence of any transport except man in the fly belt of tropical Africa may be seen from the fact that when General Smuts went into East Africa some of the natives had never seen a horse. They were dumbfounded by the mounted men. Even bodies of well-trained armed Askari, or native soldiers, were seen to throw away their rifles and run for dear life into the bush at the first sight of mounted men. *Royal Geographical Society*, 1918.

The wide range of the fly may be seen from the fact that one variety of the tsetse fly (*Glossina palpalis*) ranges in suitable localities all over tropical West Africa, thence eastwards to the Bahr-el-Gazal and south to the southern end of Lake Tanganyika. Another variety, *Glossina morsitans*, is found from Senegambia to Southern Kordofan and Abyssinia in the east and southwards as far as Lake Ngami and Zululand.

of the rivers are only navigable for part of the year; the Niger, for instance, is only useful for four months for steamers of any size. Nor were matters any better in the Malay Peninsula. Sir F. Swettenham describes the difficulty of travelling there before the English made roads and built railways.

"The commerce of the country was by the rivers; they were the highways and the people would not leave them unless they were compelled to do so. The country folk moved about but little, for they knew the difficulties too well. A boat journey of a hundred miles down river would take a week, and back again a month or more. When people of consideration had to journey by land, they travelled on elephants, if they could get them, and cut their way through the jungle. Pedestrians had to foot it as best they might: over the roots, through the thorns, wading or swimming rivers and streams, ploughing through miles of bog and mud in the heat and rain, stung by everything that stings (their name is legion), and usually spending two or three nights in the jungle with any kind of shelter that the forest could supply. As for food, the traveller or his people carried it, and even in villages it was practically impossible to buy anything except an old hen." [1]

The effect of the railway was to remove the shackles of centuries, and to alter all men's conceptions of space and time. Goods could now be moved that previously were non-transportable, human beings became increasingly mobile, new areas were opened up, physical obstacles were overcome, and mechanical transport became the first factor in the development of new countries.

A steamer is useful to go up a river against the current where navigable rivers exist, but a railway is more important as it will penetrate forests and go over mountains in directions where no rivers exist or where ranges and deserts were previously insuperable barriers to transport. Railways take goods and people past rapids or through dense tropical jungle and take both cheaply.

The effect of railways is best told in the words of those tropical administrators who knew the countries both before and after the building of railways.

Sir John Strachey, writing in 1882, emphasized the great importance of railways to the trade of India and the efficiency of its administration.

[1] *Malaya*, p. 119.

"When I went from Calcutta to my first station in the North-Western Provinces, I was carried about a thousand miles in a box—for a palanquin is nothing better—on men's shoulders, and it took some three weeks to toil through a journey which is now accomplished in two days; there were no other means of travelling through the richer and most civilized parts of India. Speaking generally, roads and bridges had only begun to appear.

"The railways not only directly developed the resources of the country, increased the wealth of the people, and profoundly altered the conditions of life, but they stimulated the vitality of every branch of the administration, they brought the various provinces of the Empire closer together, and England closer to India; English influence became stronger and stronger, and all classes set before themselves new and higher standards as they were more frequently and immediately brought into contact with European habits and civilization . . . Demands for improvements cropped up in every city and in every district of the country."

The effect of the railways in stimulating both exports and imports is also stressed by the same writer.

"Taking cotton manufactured goods as an illustration, we shall find that the value of 1 lb. of cotton manufactures may be roughly taken on the average at about half a rupee; 1 maund, or, say, 82 lb., will be worth Rs. 40, on which the duty at 5 per cent will be Rs. 2, or annas 32. Further, the transport of the same quantity by rail for 500 miles will be about 10 annas, or one-third of the duty. Also, the cost of cart transport being about four times that of transport by rail, the saving due to the introduction of railways is three times the actual cost by rail for 500 miles, or about annas 30. Hence it appears that the virtual effect of substituting 500 miles of railway transport for cart transport is equivalent to taking off a duty of 5 per cent."

"But imports are paid with exports. For every ton imported of cotton about ten tons is needed to pay for it. Taking present value of cotton goods imported at £25 million, and their weight as 250,000 tons, the export produce equal in value might weigh about 2½ million tons, on which the railway receipts will be about £2 million. The saving in the cost of transport of this produce by rail over the old method by cart would be about three times the actual cost by rail,

or, say, £6 million. Thus a most important stimulus is given by the railways to the import trade by bringing a largely increased quantity of produce within the range of the export market, while the cost of the imported goods is at the same time reduced and they are consequently brought within the means of an increased number of purchasers." [1]

The effect of the railways in relieving famines was very striking. Bullocks can only carry a small amount. Part of that amount has to be eaten by the animal and its attendant on the way, and a surplus has to be left for the attendant and the bullock to eat on the way back. The result is that the amount left for famine relief under these circumstances is very small indeed.

"It is an unquestionable fact that the railways, and the railways alone, were the salvation of the situation in North Behar during the famine in 1874, and that they have again been the salvation of the situation in Madras during the present year (1878). The sea no doubt would have thrown rice into the town of Madras, but with the cattle dying of drought it would have been impossible to move the grain up country . . . nor would canals have helped, for the broken upland country of Bellary and Kurnort and the Mysore plateau are physically impracticable for big canals, and had there been no railway within reach of these districts the people where they have now died by hundreds must assuredly have succumbed by thousands." [2]

Sir Harry Johnson has borne witness to the effect of railway transport upon health :—

"I cannot lay too great stress on the importance of this railway communication with the coast. Much of the British Central Africa Protectorate is healthy for European settlers, but is separated from the Indian Ocean by excessively unhealthy tracts of low-lying country which have to be traversed at present on foot and on river steamers, the traveller being compelled to remain for days or weeks in districts reeking with malaria. The result is that he gets the fever. On the other hand, if he could get into the train at the coast port and in a few hours be whirled up to the delightful hill country of the Shire highlands, and in like measure return thence to Europe by railway and ocean

[1] *Finances and Public Works of India*, pp. 318–19.
[2] "Speech of Lord Lytton," 1878, quoted Strachey, op. cit., p. 174.

steamer, this beautiful country . . . would be as little dangerous to settlers as Ceylon." [1]

Speaking of Sierra Leone in 1908, Mr. Allridge said :—

" It would be quite impossible for me to describe the really extraordinary changes produced by this up-to-date Government railway ; even now, although I have travelled by it several times, I cannot yet realize that I am being cheaply and safely carried over the very ground that it formerly took me three or more weeks of discomfort, peril, and expense to cover—a distance of 220 miles, that I can now do in a couple of days.

" The railway has completed the pacification of the Hinterland. It has penetrated the remote fastnesses of the chiefs who used to be constantly at war in regions they considered inaccessible to the white man. It has brought these regions with their illimitable natural wealth into touch with the European markets, and it has afforded new fields for trading operations to numbers of Sierra Leoneans.

" Around the stations along the line branch trading factories have been opened by the large European firms, and consequently the revenue of the colony has increased at a remarkable rate. Some idea of what the Government railway has already accomplished in the way of improving the exportations of the two principal articles of produce—palm kernels and palm oil—may be gathered from the fact that whereas in 1903, only five years ago, the exports of kernels from Freetown are scheduled as being 8,199 tons, they had risen last year to 20,431 tons, while palm oil had risen in the same period from 35,104 to 157,823 gals., this marvellous increase being mainly attributable to the advantages of railway communication." [2]

The same authority, taking part in a discussion on " The Extension of British Influence and Trade in Africa",[3] brought out the difficulty of transferring palm kernels by carriers. " One great barrier, and one alone, prevents the utilization for commerical purposes of the vast natural resources of the Sherbro hinterland ; that barrier is the difficulty of transport. At present it takes at least 30 men to carry down a ton of palm kernels to the nearest trading centre. The value

[1] *Proceedings R. Col. Institute*: " British in Central Africa," 1896–7, vol. xxviii, p. 56.

[2] Allridge, " Sierra Leone Up to Date " : *Proceedings R.C.I.*, vol. xl, p. 48.

[3] *Proceedings*, 1895–6, xxvii, p. 38.

of this ton of kernels is £8 in barter . . . It is therefore evident that the produce can only be worked within a limited area, leaving the more distant parts of the hinterland, as I have myself frequently seen, absolutely untouched."

The effect of the railway in raising prices of produce in Nigeria to the cultivator is seen from the fact that when the railway reached Kano ground nuts which had been sold at £3 10*s.* a ton later fetched £40 to £45.[1]

During the war the French Government bought the whole of certain crops in West Africa. They had to organize the transport of 4,200 tons of cereals furnished by eight districts, involving the employment of 125,000 carriers, who gave altogether 2,500,000 days' work.

"On the basis of the work done on the Ivory Coast to transport 4,200 tons of produce, the 20,000 tons of palm oil annually exported from the French colonies will involve the employment of about 600,000 carriers giving twelve million days work." And this in a country where labour is urgently needed for cultivation or public works.[2]

Nor was this a cheap method of carriage. Sir Frederick Lugard calculates that at a wage rate of 9*d.* a day it comes out at about 3*s.* per ton mile. "It follows that £30 a ton at the port of shipment will have cost its full value to transport over a distance of less than 200 miles, leaving nothing for original cost of production and profit to the producer." The result was that regions further than 200 miles inland could not be developed unless there was a navigable waterway.

Apart from the withdrawal of able-bodied men from productive labour, "head carriage involves the packing of merchandize or produce in parcels of 60 to 65 lb. weight (which, of course, adds to the cost) as well as much breakage, damage from weather and rough handling and occasional theft in transit. Heavy or bulky articles (such as indivisible parts of machinery, girders, etc.), which must be strung on poles and carried by many men, can only be transported at more than double the ordinary cost, and by very slow stages . . . Carriers are at all times difficult to get, and in parts of the Southern provinces of Nigeria are practically unobtainable."[3]

While the value of the railway for the carriage of goods

[1] Lugard, op. cit., p. 298, note.

[2] "The Toll of Human Transport" in *West Africa*, 30th Oct., 1920, quoting *Les Colonies et Marine.*

[3] *Report on the Amalgamation of N. and S. Nigeria, Cmd.* 468, p. 83.

cannot be overestimated, the indirect and permanent results on the native inhabitants are hardly less important. In India so great was the demand for coolies to build the railways that it had the effect of abolishing slavery. People remained slaves because there was nothing else for them to do if they were free. When the alternative of railway work came to the front, after 1857, the coolie claimed his freedom, the British Government enforced it, and the prospect of losing their slave and serf cultivators raised the condition and payments of those that remained behind. The effect of building the Western Railway in Nigeria up to the Udi coalfield was that " a particularly turbulent tribe has been taught to seek labour for wages, and has earned not less than £34,000 in cash with which to purchase imports and improve its standard of living . . . a new outlet has been afforded for native skilled labour with a new means of training it, and a coin currency has been promoted through a large and densely populated district." [1]

" All who have experience of new undeveloped countries in the Tropics have witnessed the galvanic effects which improved communications produce on even the most somnolent localities and upon the productive energies of the most indolent and backward peoples," said Sir Hugh Clifford to the Nigerian Council in 1923 when advocating the building of the Eastern Railway, which was not likely to " pay " except in indirect results.[2]

" For the development of the African continent is impossible without railways, and has awaited their advent. A railway reduces administrative expenses in the transport of stores and in the time of officials in reaching their work : it saves the lives and health of officers : it reduces the number and cost of troops required for policing the country by increasing their mobility : it renders direct taxation possible by affording a market for produce and increasing the wealth of the people : it has opened up new markets for British trade : it has killed the slave trade : it liberates labour engaged on transport for productive work : and by proper methods of construction it forms the most valuable of educational agencies for a free labour supply. It has been calculated that one railway train of average capacity and engine power will do the work of 13,000 carriers at one-twentieth the cost." [3]

[1] *Cmd.* 468, op. cit., p. 54.
[2] *Address*, 1923, p. 113.
[3] Lugard, op. cit., p. 463.

A new mobility of persons and goods, peace and security, the great technical school for natives, the promotion of trade, the creation of new values and new wealth especially in interiors, all these things are the outcome of railways in the Tropics.

Roads are, however, assuming a new importance with the possibilities opened by motor-cars and lorries. Nothing is more striking than to follow up in the annual reports the increased number of automatically propelled vehicles which are imported into the various colonies year by year since 1918.[1] The problem of allotting the land facing roads, previously almost valueless and now valuable, is not one of the least of the problems of tropical administrators.

But roads are more valuable in certain parts than in others. For instance, over large areas of Africa where the tsetse fly destroys the draught animals, a road is no more use to the native than a forest path, and since he is himself the carrier a forest path is preferable, as it has more shade. If he is rich enough to afford a motor-car it is another thing altogether, but this would not apply to the great bulk of African natives. A railway is free to everyone at a moderate rate. Moreover, railway transport is the cheapest form of transport at present available. Except for short distances motor traffic seems at present to be more expensive than even carriers.[2] Hence where there is no railway the carrier is still the great transport agency of Africa.

After railways and roads the next most important transport links are the port facilities and port accommodation. It is no good bringing material down to the coast if the cost of getting it on to the steamers is almost prohibitive or if it has to lie for weeks deteriorating because it cannot be loaded owing to heavy seas running. A boat-load of cocoa beans may easily be ruined by waves

[1] In Uganda in 1920 of 15,876 tons of cargo carried by the transport department 7,885 were carried by motor vans, 4,500 by carts and 1,783 by porters and 1,708 by contract. There are over 1,200 miles of roads opened for traffic and more than half are suitable for motor traffic in all weathers. About 1,000 miles of good native tracks are available in the dry season. *Report on Uganda*, 1921.

[2] Sir F. Lugard calculated in his report on Nigeria in 1920 that it cost 1*s.* 8*d.* per ton mile to move goods by carriers and 2*s.* 6*d.* by motor for distances of 320 miles. For short distances of 40 miles carriers cost 1*s.* 8*d.* per ton mile and motor lorries 1*s.* *Cmd.* 468, p. 86.

breaking into the boats, which have to shoot through the surf. The whole export trade of a country may be hung up if it has to be squeezed through a neck too narrow to accommodate more than a small amount at a time, and what is true of the export trade is true to a more limited extent of the import trade, which as a rule is not so bulky as the export trade, as it mostly consists of manufactured material, while the export trade is mainly raw material. But where the imports consist of machinery or locomotives the task of landing these in surf boats is one of great difficulty as it adds to the cost and limits trade. The constant dredging of harbours, as in Calcutta, to take big ships alongside, the building of sea walls to protect the port from the monsoon, as in Madras, the building of wharves and jetties, as in Kilindini, Lagos, and Singapore, all this is as necessary, if a large foreign trade is to be carried on, as the calling of a regular line of steamers.

While in the Tropics the railways are either state owned and worked or state assisted, shipping has been a matter of private enterprise. English shipping companies were not merely well established by the 'eighties but were eagerly seeking for cargo all over the world. Given the dock and harbour accommodation, sea transport presented no difficulty.[1] The road, the sea, is already there, and costs nothing to make. It was the entrances and exits that were the problem, and those shipping does not itself provide. Therefore, its fixed commitments are less and its mobility so much the greater.

With the exception of the railways of India, Nyasaland and Rhodesia, the railways in the British Tropics have not only been built by the Government but have been worked by the Government.

In India no railway lines have been constructed without grants of free land, and very few without considerable Government assistance in the shape of a State guarantee of interest. A large portion of the lines have been actually built by the Government, and are worked either by the Government itself or by private companies under Government control. In Nyasaland, where private capitalists built the Shiré Highland Railway with some financial assistance and free land grants from the British Government, the motive was not commercial but philanthropic and the railway was chiefly due to the desire to put down the slave

[1] For the factors making for cheap sea transport after 1870, see p. 17.

trade. In Rhodesia the mining development seemed to promise a fair return on the capital invested in railways, but even here the Chartered Company guaranteed the interest on many of the lines, and was itself responsible for finding much of the capital.

The shortest way to the coast lay through the fly belt to Beira. Till the railway was made this route was impossible for goods as the transport animals died. No railway connected Rhodesia with the south and the new colony was in consequence a sort of island on which the settlers were marooned till railways linked them up with the East coast or South Africa. Railways were the first essential and the company was bound to find money for them if it were to make a beginning.

The chief reason why the other railways in the British Tropics are not merely Government owned but Government built and Government operated was the fact that private capital would not undertake the risks. Not even India, with her great potentialities, could secure capital for her railways without a Government guarantee of the interest, but in Africa, where the population was small and scattered for the size of the country, and where traffic for the railway was problematical, it was Government or nothing.

The construction has often been undertaken by Government engineers simply because no contractor would tender, not being able to calculate what the cost would be. The country to be penetrated was too unexplored, the absence of a detailed survey, the difficulties of a labour supply, of the health of the staff, of the landing of the equipment, the nature of the subsoil, the destruction by floods, all these were too uncertain for any reliable forecast of the outlay to be made beforehand.

Another reason which led the Government to undertake railway building itself lay in the importance of railways for strategic purposes, and their value in keeping order owing to the ease of moving troops. The necessity of holding a country in many cases left the Government no choice, since the disturbed condition hindered the investment of private capital in railways. The famines which helped to force the Government into railway building in India were not such an important factor in less populated regions. Where considerations of famine relief and defence are prominent the cost is secondary. The Uganda railway was built primarily as a strategic

railway, and the Government expected to face an annual deficit.

The revenue producing capacity of the railways has also made colonial governments unwilling to let the function of railway operating pass into other hands. The Government of the Federated Malay States would be unlikely to hand over its very profitable railways to companies. They have been built out of surplus revenue, and yield 3 to 6 per cent on the capital which their Governments have invested in them. The general attitude of looking to Governments in the Tropics as a sort of Providence and expecting it to inaugurate "Public Works" also created an attitude of mind that expected the Government to take the initiative. In the same way private capital, expecting that the Government would perform the work, was shy in coming forward.

All these factors combined to make tropical railways and Government railways interchangeable terms.

Thus the various Governments undertook the making of the lines in both East and West Africa, as they had previously done in Malaya, Ceylon, Jamaica, and parts of India such as the Punjab.

The early railways in both East and West Africa were costly to build. "These railways have been constructed," said the official report on the West African railways in 1905, "through dense tropical forest, in a deadly climate which, in spite of every precaution in accordance with improved principle of malaria prevention, caused constant changes in the staff of every grade; amid difficulties arising from heavy rainfall, from scarcity and inferiority of labour, from conditions under which cargo had to be landed as on the Gold Coast by surf boats and lighters on an open roadstead, while native revolts and military operations have interrupted and delayed the work."[1]

The construction of Government railways has passed through two phases.

The early Government railways in Africa were made by a consulting engineer in London, who appointed his own resident engineer in the colony. Bits of the line were given out to native contractors, and they bid against one another for the scanty amount of labour available. Not merely did this run up the wage bill but it produced bad work on the part of the

[1] *Cd.* 2325.

native. He knew if he did not please one man he could walk over to another, who would be glad to get him. Therefore the labour was inefficient as well as extravagant. Nor had the Colonial Government any power over the engineer or the work. It merely had to pay the bill. "The consulting engineers were in the position of contractors with no time limit, no penalty clauses, and no check on work." [1]

In Northern Nigeria a new system was evolved by Sir Percy Girouard when building the Baro Kano line. The Colonial Government made the survey, used its own officials to recruit and train the labour, and employed its own technical engineering staff. It obtained the labour through the chiefs, the labourers obeyed the officials they knew who could thereby enforce discipline and make railway work into a technical training-ground for ex-slaves. There was no counter bidding for labour with the consequent demoralization. This method of departmental building, as distinct from the central construction of the early period, proved to be much cheaper,[2] and is now generally followed.

[1] *Cmd.* 2016, 1924, "Private Enterprise in British Tropical Africa," p. 6.

[2] The case for Government construction had been stated as follows (*Cmd.* 2016, 1924, pp. 8–9): "The advantages of construction by the Government are found at their maximum in the case of a country like Nigeria, where a programme of construction extending over a number of years makes it possible for the Colony to create and maintain in constant employment a thoroughly efficient construction staff under a first-class railway engineer. Without this condition the recruitment and maintenance of such a staff would be impracticable. When, however, this condition is fulfilled there are claimed as advantages of the State system that contractors' profits (enhanced possibly in the case of undeveloped countries by inflated estimates to cover unknown risks) are saved; that the cost of the expert staff required for measuring up quantities and checking materials in order to see that they are in accordance with contract specifications are saved; that plans can more easily be modified during the progress of the work as new information renders changes advisable, and new sections of the line can be brought into use as completed and so earn receipts without incurring contractors' claims; that an immediate start can be made as soon as the location survey of the first section is complete; that Government can make full use of its existing railways and steamers to assist in construction work; that its political staff is in a far better position to handle indigenous labour with a minimum disturbance of the labour market than the contractor, who necessarily enters as a competitor against other employers, including the State itself; that railway construction under such conditions can be made a potent educative influence among a primitive people unused to, and timid of, service under Europeans; that the staff employed becomes as well trained to team work as a contractor's and has greater knowledge and experience of local conditions; that so long as the railways are constructed and operated by the State all special plant required, instead of becoming derelict on the

The railways when made have usually been operated by the Government, though in India some of the Government-built lines have been operated by private companies under Government control.

Both the operation and financial management of Government railways in East and West Africa have been severely criticized. The rates have been deemed too high and the facilities inadequate. The tendency to appropriate the revenue and neglect renewals has been marked in the management of the Uganda line, and was also a feature of the Indian railways during the War, for which the whole transport system of India is now suffering. In some cases, such as Sierra Leone, the railways seem to have been extravagantly worked.[1]

The Committee appointed by the Secretary of State for the Colonies to consider transport questions in East and West Tropical Africa reported in favour of the separation of the state and railway budget,[2] a system already in operation in the Union of South Africa. Any profits earned by the railways were not to go to general revenue but were to be devoted to improving the line, providing for renewals, and reducing rates. The tropical railways would therefore be under a separate administration, which it is hoped will prove less bureaucratic and more open to the influence of the public and traders, whose point of view was to be represented by a local advisory board, which should be in constant touch with the railway administration, which would in this way be commercialized.

The Committee also recommended that there should be a railway inspectorate at the Colonial Office, which should

completion of any one project, is in continuous use, either on new construction or heavy works on existing lines.

"The advantages claimed for the contract system are, in the main, that it introduces the element of competition from which, under a system of State construction, the party undertaking the work, i.e. the Government, is immune; that when a work has been put up to tender, and a tender has been accepted, the Colony knows the extent of its liability, whereas there is no guarantee against any excess over the estimate when the work is undertaken by the State; that firms of wide experience and reputation, whose life business is work of this kind, can carry through such projects more efficiently, more rapidly and more economically than any Government; that with such firms ready to undertake the work the recruitment and entertainment by Government of a constructional staff of its own is neither necessary nor economically sound."

[1] *Report* by Col. Hammond.

[2] The same recommendation as to the separation of State and Railway budgets was made by another Commission with regard to India.

deal with all railways in the tropical Crown Colonies, and would be able to supply the technical expert knowledge necessarily lacking in the administrator.[1] This was in reality a recommendation in favour of an Imperial Railway Department, which is an interesting comment, not merely on the growing importance of railways in the Tropics but on the way in which railway questions, like shipping questions, operate in the direction of an imperial mechanism to deal with the fundamental questions of transport.

The Protection and Development of Native Peoples

A greater contrast can scarcely be imagined than that between the native policy of France and England in their respective tropical spheres. While the attitude of Germany and Holland towards natives was somewhat similar, the methods of these Teutonic nations differed radically from those of the two former colonizing powers. France having lost her regions of racial expansion, has concentrated on the Tropics, and to her colonization means tropical rule. The French peasant does not emigrate, and even Algieria is peopled mainly by immigrants from Spain, Italy, and Malta, and the children are converted into Frenchmen by education. The underlying idea of France in her treatment of native races was a fine one. Personal freedom, the right to vote, and no distinction of colour were the logical consequences of the belief that liberty, equality, and fraternity are unassailable truths, and that therefore the sooner everyone, *indigène*, black or white, is recast in the French mould by the process of "assimilation", the better. France has proceeded to introduce the vote and individual land holding and the French tariff for foreign countries into many of her great overseas possessions such as Algeria, Indo-China, the French West Indies, and Madagascar. All French goods go in free. The idea is that Indo-China and Brittany are equally part of France under the policy of assimilation, and that a Frenchman and an Annamite have both the same rights and privileges as Frenchmen and as human beings. Once assimilated in this way it is thought that no French colony will wish to sever its connexion with France. Tunis, French

[1] Sir E. Stockton dissented from this and from any proposal that the Government should in future either construct or operate tropical railways in the regions in question.

West Africa, and Morocco are Protectorates, and the alterations there have been less drastic as certain treaties with other Powers stand in the way of assimilating the tariff system to that of France. Of course, being Frenchmen, the natives are liable to conscription for the army.

The French idea of "assimilation" took no account of the ethnological or other historical antecedents of the natives. French ideas of private property in land were applied to the communal or clan system they found in Algieria with disastrous consequences to the native. The results were considered to be so unsatisfactory that immediately prior to the war there was in France a great demand for a study of the various institutions of the natives themselves, especially as the Protectorates in which the French had not interfered with native habits and customs seemed so much more prosperous and contented than the assimilated colonies.[1]

While on the one hand the Frenchman believed not merely that French ideas were the best for mankind, but also that the *indigènes* could eventually be made into good Frenchmen, the Dutch took quite another line. They went to the Tropics to make money—for Holland—and their colonies were sources from which Holland was to draw a substantial revenue. If the native would not work he must be made to work to develop the Dutch plantations. "Since the end of the seventeenth century the Dutch system of colonial administration has undergone considerable improvements, but it is still distinguished by three special features. These are firstly that the colonies are primarily administered for the benefit of Dutchmen; secondly, that the revenues which they produce go to swell those of the mother country, instead of being exclusively used for the development of the land which provides them; and thirdly, that equality between white men and the natives is regarded as an inadmissible proposition." [2] "They have abstained from interference with the religions and customs of their colonial subjects, but they have looked upon native institutions mainly as convenient instruments for the extortion of labour and taxes." [3] Holland has always regarded her colonies as direct sources of revenue, and their maintenance and administration as matters which are

[1] Girault, *Colonial Tariff Policy of France*, p. 226.
[2] Sir H. Clifford, *German Colonies*, 1918, p. 25.
[3] Ib., op. cit., p. 57.

primarily to be conducted in the interests not of the native populations but of Dutchmen. Germany made some small efforts at colonizing in the reign of the Great Elector in the seventeenth century, but failed completely. She had no past interests to protect when she began in Africa "to co-operate in the work of civilization". She was simply ambitious to count as a world state. "In a degree unparalleled in the history of European imperialism, the German colonial empire was the result of force and of design, not of a gradual evolution." She therefore almost unconsciously took the Dutch system for her model, but proceeded far beyond the original model. The Dutch "may not make the natives contented, they do make them diligent. They may not grant them any large measure of freedom, but they do secure to them a certain degree of prosperity. They rule their colonies primarily for the benefit of Holland and of Dutchmen, but incidentally they confer upon the people the inestimable blessings of peace. The Germans, by an oppressive and iniquitous system of forced labour, also succeeded in making their native subjects accept the curse of Adam",[1] but they did it by a system of severe flogging, twenty-five lashes being the minimum. Territory was expropriated for the sake of German planters and, as no native would work on the lands thus taken away from him, compulsion was resorted to for the benefit of private companies and individuals. The natives were paid a fair wage and "were given the alternative of working on these properties or of being flogged until they consented to do so".[2] "When Lome, the capital of Togoland, was captured by the British in the first week of August, 1914, whips were found forming an apparently essential part of the furniture of all bungalows inhabited by German officials and of certain of their officers. In the stores of the local Public Works Department they were kept ready for issue in neatly trussed bundles of ten to the packet—fairly convincing evidence that a perennial supply was needed and that the whips disappeared in use."[3] Herr Dernberg, the German Colonial Secretary, confirms this, for he told the Budget Committee on the Colonies on 18th February, 1908, "On the coast (of German East Africa) it makes a very unfavourable impression on one to

[1] Op. cit., p. 67.
[2] Op. cit., pp. 91–2.
[3] Op. cit., p. 74.

see so many white men go about with negro whips. I even found one on the table of the principal pay office of Dar es Salaam." He added that in East Africa "labourers were obtained under circumstances which could not be distinguished from slave hunts". "It has even happened that settlers have seated themselves at the wells with revolvers, and have prevented the natives from watering their cattle in order to compel them to leave the latter behind." [1]

The German colonial system was in form and character a military despotism, merciless exploitation supported by overwhelming force constituting in German eyes the sole means whereby primitive peoples were to be governed.[2]

Great Britain, however, developed during the eighteenth century a great sympathy for and a feeling of responsibility towards the subject races. She impeached Warren Hastings

[1] Quoted Dawson, *Evolution of Modern Germany*, p. 375. Throughout the Dark Continent "white men" and "Germans" are regarded and spoken of by the natives as two utterly distinct species of mankind. Sir H. Clifford, op. cit., p. 106.

[2] Professor Bonn thus described the German system in Africa in a lecture to the Royal Colonial Institute on German Colonial Policy (*United Empire*, Feb. 1914) :—

"The question of German colonial policy is a question of native policy. It is not merely a question of how we are going to rule them, it is what we are going to do with them when we have the power to shape their fate. In Cameroons and Togo we are ruling native states and native tribes by a bureaucracy somewhat on the lines of the Indian bureaucracy. In East Africa we are creating a mixed colony, planting fragments of a white society amongst dense African masses. In South-West Africa we have created a kind of manorial system with a European lord of the manor and an African serf." *The Foreign Office Handbook No.* 113, p. 40, *Tanganyika*, thus describes the German system :—

"Nearly all tribes in German South-West Africa are capable of maintaining themselves without working for wages, and object to doing so." The German view, as stated by Hassert (*Deutschlands Kolonien*, p. 618), is that colonization consists of the utilization of the soil, its products and its men for the economic profit of the colonizing nation or in G. A. Fisher's phrase that "colonizing Africa is making the negroes work".

It seems clear that although the rapid development of the colony as a farm devoted to the cultivation of tropical products required by Germany (which seems to have been the aim of the Government) might be promoted by the German system, the permanent improvement and civilization of the people was incompatible with it as it led to violence and cruelty on the part of the rulers and revolt or sullen depression among the natives. An interesting experiment was also tried in one district of common co-operation of native and planter. In the Lindi district the planter prepared the ground by machinery, supervised the manuring, sowed the crop, and bought it at a fixed price from the natives. (Ib., p. 69.) This, again, is much like the Dutch system in Java before 1815. Sir S. Raffles, Java.

for his alleged exploitation of Indians, she spent large sums in suppressing the slave trade. She not merely bribed Spain with £400,000 in 1820 and Portugal with £300,000 in 1830 to come into line, but she devoted her navy to running down slave traders on the high seas, a task which cost her on the average £200,000 a year,[1] and she paid £20,000,000 compensation to her own slave owners at the emancipation.

The policy of the British Government under the stimulus of this awakened social conscience has been to regard the revenues of each colony as funds to be devoted to local services and the development of the territory in which they were raised. She demands from the tropical colonies no contribution for naval defence or any other form of tribute. Until recently she threw their trade open to all the world without seeking to secure any advantages for British subjects over either natives or foreigners. During the war Great Britain did no more than institute some preferences on the export of raw materials. For instance, before the war the bulk of the palm oil went to Holland to be converted into margarine. This left England without an essential food product and with an inadequate supply of glycerine for munitions when war broke out. Palm oil for use in England was exported between 1919 and 1922 duty free to England, but a charge of £2 per ton was imposed if it went outside the Empire.[2] The preference was originally intended to last for five years, but it was abolished in 1922, as the West African trade was in such a depressed condition that it was considered that there should be the freest possible market.

England has insisted upon complete equality before the law without distinction of race or creed, and she has interfered as little as possible with the religions, customs and institutions of the native populations.[3] Her endeavour has been that the natives should be protected from unfair exploitation, and that the lands should be governed primarily for the benefit of the native populations and that there should be the largest measure of personal freedom, peace, order, security, and equality of opportunity. The oath of office which is administered to the Governors of

[1] An estimate gives £575,466 as the cost of suppressing the slave trade in 1842. *Report*, 1843, lviii.

[2] For other examples see Gregory, *Tariffs*, p. 287.

[3] Sir H. Clifford, op. cit., p. 56.

British colonies is that they shall " do right by all manner of people according to law, without fear or favour, affection or ill-will ".

Stages in the Development of a Native Policy

The British had originally gone to the Tropics as traders, and had become planters in the West and rulers in India.

The planting industry rested on a basis of slave labour, but under the influence of the humanitarian movement and the ideas of liberty prevailing at the end of the eighteenth century the British people decided that the institution of slavery was wrong and slave trading abominable.

The British Parliament was really confronted by two problems at the beginning of the nineteenth century, the problem of keeping order for the natives and for its traders in India and the problem of freeing the slaves in the other great tropical region of British influence, the West Indies. But the problem of keeping order in India also meant the deliverance of the Indian peasants from Afghan and Mahratta marauders, from organized bands of robbers and murderers, i.e. from thugs and from daciots, and rescuing them from the oppressions of local potentates. In the West Indies and Africa the protection of the native not merely meant the freeing of the slaves, but the policing of the seas to stop the traffic. Later, it meant the policing of the interior of Africa. It meant the abolition of human sacrifices.

In the first half of the nineteenth century England considered that if she freed the slave and stopped the slave trade on the high seas she had done her duty towards the coloured population. With personal freedom she believed the slave could be trusted to look after himself. Given law and order the Indian peasant, so it was thought, was bound to flourish. As time went on it was found that this attitude was impossible to maintain. Merely to free slaves was to produce idleness and economic chaos as in the West Indies. The freed negro did not want steady work; he deteriorated and the planter lost control of his labour supply. The United States had freed the negro and had given him a vote with disastrous consequences as regards racial friction. The Indian peasant, delivered from the heel of the conqueror, merely multiplied and became a helot to the money-lender. Great Britain began to recognize that she had a *civilizing* mission and not

merely a *freeing* mission to all indigenous peoples under her control.[1]

Two distinct stages can be traced in the treatment of native races. There is an optimistic stage, where the general opinion both in England and France seemed to agree that the coloured races were fundamentally the same as the white, only a little darker, and that once slavery was removed there would be marvellous progress attained under a regime of freedom and order. The French held that men had been made bad by bad laws, give them freedom and good laws they would attain to a perfect civilization. Then the scientific stage was reached. Anthropology and Ethnology developed, and after 1870 men began to realize that human beings were fundamentally different, not merely in the shape of their heads, their colour and hair, but in their institutions, religious beliefs, likes, dislikes, economic and social structure. While the scientists were giving expression to the diversity of standards among human beings, the practical administrators were beginning to work out the problem on the spot. India had come under British influence in the optimistic era. The aim there had been to establish law and order so that a man should realize himself and his potentialities. Thus bad native chiefs were removed and the English governed direct, but were guided by the principle of *laissez faire*. In Malaya, however, which came under British influence in 1874, the plan was adopted of giving the native rajahs

[1] The attitude of great tropical administrators towards the native question is interesting. Lord Milner, speaking at the Royal Colonial Institute after a paper on German Colonial Policy, said, "That nation will in the long run be most successful which exhibits the greatest wisdom in its efforts to promote the welfare and progress and contentment of its subject peoples." (*United Empire*, Feb. 1914.)

Lord Cromer wrote in 1913 (*Political and Literary Essays*), "In dealing with Indians, Egyptians, Shilluks or Zulus, the first question is to consider what course is most conducive to Indian, Egyptian, Shilluk, or Zulu interests. We need not always inquire too closely what these people, who are all nationally speaking in *statu pupillari* themselves, think is best to their own interests, although this is a point which deserves serious consideration. But it is essential that each special issue should be decided mainly with reference to what by the light of western knowledge and experience, tempered by local considerations, we conscientiously think is best for the subject races, without reference to any real or supposed advantage which may accrue to England as a nation."

Another famous tropical administrator, Sir Frederick Lugard, has entitled his book on the African Tropics *The Dual Mandate*, on the ground that while there is a mandate to open up these regions for the benefit of the world, there is also a mandate to safeguard and develop the indigenous inhabitants.

a Resident as Adviser, and the idea was to develop the people through bringing pressure to bear on their own chiefs. In this way it was thought that native civilization would not merely be left intact, but would be given room to grow and develop along its own lines. Sir Frederick Lugard gave a striking example of the success of " indirect rule " in his reorganization of Northern Nigeria, and it is now the generally accepted principle of British native administration. If people are to be guided through their chiefs it is the Government who must do the guiding, and not the trader. This has made for the elimination of the Chartered Company and for the gradual assumption by the Government of ever-growing economic functions.

" Our object in brief is to leave administration as far as possible in the hands of native authorities, wherever they exist, under the supervision of the Government, starting from things as it finds them, putting its veto on what is dangerous and unjust and supporting what is fair and equitable in the usage of the natives. Much obviously depends on the existence and efficacy of any local or tribal organization. When such does exist the aim of the Government is to foster and guide it along right channels ; where it has ceased to exist it may still be possible to recreate it. In pursuance of this policy the Government encourages native chiefs to administer their own tribes in accordance with native customs in so far as those customs are not entirely repugnant to ideas of justice and humanity, and aims at non-interference except where necessary." [1]

Four stages have been involved in the treatment of the less developed peoples. The first stage consisted of the transition from subjection to personal freedom and the prevention of slavery under other names. In other words, the task has not merely been one of freeing the slave, it has involved the creation of a free labour market and a change from status to contract.

The second stage formed part of the new constructive policy with regard to natives, and belongs to the scientific stage. It was bound up with agriculture.

As agriculture is the basis of economic life in the Tropics, the settlement of land tenures, the improvement of agricultural methods, and the introduction of new agricultural staples have been and are fundamental problems. Since

[1] " Report on Sudan, 1923," *Cmd.* 1837, p. 7.

there is practically no industrial development except in certain parts of India, and even that sub-continent is as a whole overwhelmingly agricultural, it means that the British Government is ultimately responsible in its agricultural policy for the economic prosperity of the Tropics.

The third stage has involved the provision of such technical instruction as will furnish mechanics and artisans. Some type of literary education which will provide for the recruitment of a local civil service, and the filling of clerical posts on railways, has also been attempted. Fourthly, the task has now arisen of improving the health of tropical peoples and white persons working in the Tropics. The great discovery that blood-sucking insects can convey diseases to both man and animals followed on the heels of the realization of the possibilities of mass sanitation and preventive medicine, and came at the same time as scientific agriculture and plant-breeding were transforming agricultural practice. The listlessness and want of initiative of tropical peoples were discovered to be not merely due to the climate or the perversity of man but to various tropical diseases more or less preventable and curable. The same knowledge combined to make the Tropics healthier for the white man either as a trader, contractor, administrator, or planter. This meant that the directing power and the working power of the Tropics were both released to new effort.

The Suppression of Slavery

The abolition of the slave trade in the nineteenth century has been one of the most epoch-making events of that era and has done more than anything else to open up the great continent of Africa. Slavery, however, existed in all primitive countries, not merely in Africa. The English found it in India, Ceylon, Malaya, and North Borneo. If the slave trade and slave-owning were to be abolished effectively, some other form of transport had to be provided, since man was the great carrier. Some other article of commerce had to be found and other wants created, since the slave was one of the principal articles of desire and therefore one of the principal articles of exchange. Moreover, some other form of taxation had to be invented to replace the annual tribute of slaves and some form of free labour had to be provided to replace slave labour on the

land. The abolition of slavery meant an entire reconstruction of primitive society. And in that reconstruction England has played the leading part.

The African slave trade was by far the most important, the negro being both stronger and more docile than Indian coolies. Hence Africa has throughout the centuries been the great reservoir for slaves for the East as well as the West. The African trade consisted first of all in the export of human beings, and secondly in the trade in the interior of Africa. The export of negroes for the plantations in the New World was begun when they were required for the silver mines of Spain. They were afterwards used for plantation work in the English and French colonies in the West Indies and on the mainland of North America. There was also a considerable export of slaves from North Africa for Turkey and from the East coast of Africa for Arabia, India, and Persia. This continued throughout the nineteenth century, and Madagascar was the chief slave trading depôt for the East till it was acquired by the French. When the slave was sold the chief evil ceased. Slave *owning* is quite a different thing from slave *catching* and slave *trading*. A domestic or agricultural slave was at the least a valuable animal, and was therefore looked after; at the best he became a faithful and valued part of his master's household.

Slave-trading and slave-owning continued in Africa right into the twentieth century, and even now are not extinct.

A man might become a slave in a great many different ways. He could be caught and sold, or he could become a slave by being taken for a debt and kept in bondage till he paid it off. Or could sell himself or be sold by his parents, or he might be born of slave parents and was a slave from birth on the principle "Mine is the calf that is born of my cow".

Great Britain realized the iniquity of the traffic at the end of the eighteenth century. She helped first of all to suppress the slave trade on the high seas, she next went on to free the slaves in her own colonies, and then all through the nineteenth century she has been active in extinguishing slavery in Africa, India, and Malaya, where it was indigenous, but she was powerless to do much except in her own territories. As she acquired more and more territory in Africa, she continued to suppress the internal

slave trade. In this work she was joined by France and other powers.

As far as England was concerned, the slave traffic on the high seas employed no less than 155 vessels in 1802, of which 122 went to the British West Indies. Liverpool actually possessed six-sevenths of the whole trade.[1] In 1807 England prohibited the traffic to her own people in spite of the sacrifice involved in the destruction of so large a trade, and the possible injury to the West Indies. Other countries continued to carry on the traffic,[2] although it was agreed to suppress it at the Congress of Vienna in 1815.

After the trade on the high seas the status of slavery was next prohibited in the British tropical colonies in 1833, to take effect in 1834. This affected the West Indies, Cape Colony, and Mauritius.

Although £20,000,000 was paid to the slave owners it did not compensate, as the value of the West Indian slaves alone was said to be £43,000,000. The payments varied from a quarter to a half of the sworn value of the slave.[3] No compensation could, however, have made up to the planters for losing control of their hands. In British Guiana the freed slaves formed themselves into village communities, and they refused to work except occasionally, and then in a desultory manner. There was plenty of waste land, they had few wants, and preferred the pleasures of pure idleness to a high wage. As slavery was not abolished in Cuba or Brazil, the unfortunate planters had great difficulty in competing with slave-grown sugar. In Cape Colony again, its whole development was affected by the freeing of the slaves. Not merely was the compensation inadequate, but the colonists could not get the money due to them. Claims had to be sent in to London, illiterate Boers were in the hands of middlemen, who took toll of the money, and many never got any compensation at all. As at the same time the British conscience felt tenderly towards all negro peoples, the Boers were restricted in their dealings with the free Kaffirs. Things seemed very different to the Englishman at home, safely ensconced in a six-roomed villa or in Exeter Hall, from what they appeared to the colonial whose isolated farm was liable to be plundered

[1] Aspinall, *British West Indies*, p. 262.

[2] Denmark probibited slavery in 1808, Holland 1814, Spain 1820, France 1838, Portugal 1858–78, but as late as 1888 slaves were deported from one Portuguese possession to another. Lugard, op. cit., p. 357.

[3] *Acts and Papers*, 1837–8, xlviii, 690.

or his family massacred by savages. What one regarded as justice for human beings, the other regarded as robbery by the conqueror on the ground of sickly sentimentalism. This was the chief cause underlying the great Trek by which the Boers tried to move away from British influence, and the feelings engendered led to the alienation of the two races all through the nineteenth century.

The freeing of the slaves in Cape Colony made it necessary to consider the future relations of black and white as free labourer and employer, and the question of the amount of land to be allotted for the use of either race became the most important question in the South African colonies. As Great Britain extended her rule over the territories now known as Natal, the Free State, and the Transvaal, and included the great blocks of natives in South-East Africa, Bechuanaland, Basutoland, and Swaziland, the question of the treatment of negro tribes who could not now be enslaved, and were increasing, became more and more pressing.

When the Bantus came pushing down into the South they occupied the best watered areas on the East Coast. They were and still are owners of herds which pasture on communal lands; they were organized under tribal rule, and the land was held communally. After a series of wars with the English, their reserves, ample at the time, were deliminated. Some natives, however, squatted on the farms and gave a certain amount of labour to the farmers in return for the land. In this way they provided the agricultural labour supply of the whites. Under the English peace their numbers have increased, and they are outgrowing the reserves. The question has now arisen as to whether they shall be allowed to acquire land by purchase outside the reserves in the white areas. Communal cultivation is admittedly wasteful, and to permit the extension of landholding by coloured peoples with their present methods would be to encourage a backward system in a country which is doing its best to introduce scientific methods. Legislation has been passed to restrict the purchase of land by coloured people in white areas and of white people in coloured areas. As it is impossible to keep out the Atlantic with a mop, an attempt is being made to take some of the Kaffir tribes over to individual cultivation and to train them to local government. In individual cultivation more produce is got out of the land, and there-

fore it can support a much larger population. An attempt was made by Cecil Rhodes, in the Glen Grey Act, to introduce individual holdings and private property, and it has been deemed to work so successfully that it is being extended. In Europe when the land for ex-serfs became insufficient, they compulsorily appropriated noble and church land in the Revolution in France in the eighteenth century, and in Russia in the twentieth, and an attempt was made in the same direction in Roumania after the war. Germany was, however, successful in breaking up communal cultivation and taking her people over to intensive cultivation between 1815 and 1850. Those German agriculturists who failed had an outlet in the United States or in the mines and factories. It will be interesting to see whether the Union, which is inherently as autocratic and as scientific as Germany, can take its negro tribes over to individual cultivation or whether the whites will be " snowed under " in the irresistible push for more land. The outlet for the surplus black population may be found, as in Germany, either in the great mining industry or in a gradual industrial development, but here they would compete with the poor whites and there would be racial friction. It may be solved by migration and colonization of sparsely populated or irrigated areas in Africa, the very successful Punjab Canal Colonies in India being an example of what can be achieved in this way.

So disastrous were the results of a sudden emancipation in the West Indies and Cape Colony that the process has been carried out far more gradually in the British colonies which have become part of the Empire after 1833. The usual plan has been to prohibit the buying and selling of slaves and to abolish the *legal status* of slavery. That did not mean freeing all slaves at once. It did mean that a slave could claim his freedom whenever he liked, and that masters would have to treat their slaves well to keep them. It also meant that even if people had been bought or born as slaves they could at any time assert their freedom, while legislation usually provided that no one could become a slave in the future by mere accident of birth. This procedure meant too that slaves who were happy and comfortable could go on being slaves for their lifetime, protected and fed in sickness and old age, that they could not be sold or separated from their families, and that they could claim the rights of a freeman when it suited them.

This abolition of the legal status of slavery so as to prepare for gradual abolition of slavery was approved of by two such great authorities as Sir John Kirk and Sir F. Lugard. The latter stated that the sudden emancipation of the slaves in West Africa would, in his opinion, result in " complete anarchy and chaos involving no less misery to the slaves than to their masters. The former would be deprived of occupation, and the great cities would be filled with vagrants, criminals, and prostitutes; while the latter would be reduced to beggary and detestation of British rule that had robbed them of property . . . which had in most cases been paid for in hard cash . . . Slavery is at present the only form of labour contract and a very real —though perhaps in our view an inadequate—return is made by the master for his slave's work. He is supported in sickness as well as in health; his master is responsible for any crime committed by him; he is usually given one or more days in the week to work on a piece of land of his own, and his proceeds are his personal property with which he can redeem himself. . . . The general effect of the institution is to establish a form of contract (in a country where the idea of a written contract is unknown) not unsuited to a primitive race. . . . Under this regime, when well administered, cases of desertion by slaves are few and the people are for the most part happy ".[1]

It takes time to educate people in freedom and to provide the guarantees for it in the shape of a coin currency, mechanical transport, and taxation. The gradual abolition of slavery provides time to substitute another and entirely different social system.

It has been more difficult to eradicate slavery in Africa than in any other part of the Empire, and British administrators have been struggling with the question all through the nineteenth and twentieth centuries. The Civil War in the United States put an end to slavery there, and cut off one big market, but there was plenty of demand elsewhere, especially in Asia. In the interior of Africa slavery was an essential part of the social system.

" It is true that a large number of Africans, possibly a majority, rejoice at the abolition of slavery, but this is because they lived as slaves or were afraid of entering that condition. But this does not mean that they abhor

[1] Sir F. Lugard, " West African Possessions " in *The Empire and the Century*, p. 852.

slavery as an institution, only that they dislike being slaves ; should there appear any chance of owning slaves it would be a very different matter." Mr. Temple describes the indignation of " a fiery old pagan chief belonging to a primitive tribe of cannibals which had been raided for slaves from time immemorial ", when he was told that British law did not recognize slavery. Another complained that the white man had rendered life unbearable in his village by putting down the slave trade. " Before your arrival," he said, " we had no lazy, immoral young men amongst us, as we always sold anybody who misbehaved more than once. Now we cannot do so, and each is a law unto himself." " To trade in slaves is at the bottom of his heart the one ideal of the African. It is a curious sight to observe the face of a better-class native, say, a Kano merchant who formerly traded in slaves, watching a number of native pagans working, as they do for us in thousands, on the railway. His eyes glitter as he seems to be gauging the points of each and calculating what the lot would fetch." [1]

Throughout the length and breadth of Africa inter-tribal war was an ever-present condition of native life all through the nineteenth century, and extermination and slavery were practised by African tribes upon each other.[2] Slavery persisted in Africa, primarily because of the difficulty of transport in regions where the tsetse fly killed the draught animals, leaving only man who had become immune to carry goods on his head. Slaves were also the great article of currency. Being valuable for transport and as working units they were the standard thing that could be exchanged for trade goods. Taxes were also paid in slaves.

Miss Mary Kingsley describes a fine paid by a local chieftain to a British commissioner for the killing and eating of several converts. It consisted of " one hundred balls of rubber, six ivory teeth, four bundles of fibres, three cheeses, a canoe, two china basins, and five ladies in rather bad repair." The commissioner being a newcomer, was rather horrified, especially at the last item, but Miss Kingsley assured him that it was perfectly correct, and could be traded off for ivory and rubber.

Slave raiding, too, gave the men an occupation of an

[1] Temple, *Native Races and their Rulers*, 1918, pp. 224–6.
[2] Lugard, *Dual Mandate*, p. 5.

interesting nature. The women do most of the agricultural work with a hoe, and there was very little interest in life left for the dominant male if he could not hunt men. "Tell the Governor, when I die they will still find a slave held between my teeth," was the reply of one doughty chief to the Governor of Nigeria who had prohibited the great slave market in Kano.[1] "Can a cat give up mousing?" was another comment. It was regarded as an unwarrantable interference with a man's liberty and living to prohibit slave trading.

Slaves were also wanted for agricultural and domestic purposes, and, apart from the incidents attending the preliminary capture, domestic slaves were apparently quite comfortable. The Law of Islam laid down the rule that the slave should be provided with food and lodging and should be tended and maintained in sickness. A slave was also allowed to work for himself on certain days, and could thus acquire a little capital with which he could, and often did, buy other slaves. Moreover, a slave who was ill-treated might upon complaint be set free by the Mohammedan Courts. The domestic slaves lived in their masters' houses, acquired property, and even rose to be kings, as did two on the Oil rivers.[2] Agricultural slaves tended to become serfs paying in produce and labour dues for the land they held. They were attached to the land as had been the serfs in Europe, but they too tended to evolve into free peasants in course of time. Slaves were also required in addition as sacrifices to fetishes. Slavery, moreover, had certain social conveniences. Criminals and suspected wizards could be got rid of at a profit. Debt recovery was easy when the debtor or his family could simply be sold, and the payment recovered from the purchaser.

Slavery was the basis of economic life in Mohammedan lands, i.e. in Northern Nigeria, Morocco, Tunis, Tripoli,

[1] "Yet the Emir who uttered that challenge lives and reigns to-day and has accepted loyally if with little gladness the abolition of his best-loved pastime. He has survived to see the sources of the wealth which the cessation of slave trading dried up, replaced in good measure pressed down and shaken together and running over, by vast crops of ground nuts and of cotton and an inter-tribal trade in rice and salt and long caravans of camels and pack asses trailing peacefully through the once war-worn country and vastly exceeding in numbers the slow train of yoked and tortured men, women, and children, whose places they have taken." Sir H. Clifford, *Address to Nigerian Council*, 1920, p. 25.

[2] Reinsch, *Colonial Administration*, p. 68.

and Egypt, in the Zanzibar coastal territory, in Uganda, Benin, Ashanti, and Dahomey. It was in Africa itself and not outside that the great demand arose. Indeed, one chief said to Sir F. Lugard that " slave labour is to Africa what steam power is to your country ".[1] It was not merely the Arabs who did the slave raiding, but every African tribe, though itself accustomed to being raided, would set out to capture slaves from a weaker neighbour. It was formerly asserted in Nyasaland that you could not send three men on a mission or two would combine to enslave the third.[2]

The Arab traders would start from some town on the Nile and buy a few slaves to carry, let us say, cotton print goods into the interior. As they collected ivory and rubber in payment they wanted more slaves to transport the goods and would buy carriers as they went on. The chieftains whose rubber or ivory were insufficient to buy cotton goods or gin would sell slaves and to get them would make military excursions into the interior. This, of course, kept Africa in a ferment. The curse of slavery was the constant slave raids and kidnapping involved with consequent depopulation of the country, decrease of productivity and stagnation or retrogression. Speaking of a gang of fifty-two women tied together in lots of seventeen or eighteen Cameron said in 1877[3]: " To obtain these fifty-two women at least ten villages had been destroyed, each having a population of from one to two hundred or about 1,500 in all." Speaking of Leowa, the chief village of Western Ugasa, he says: " Passing through the ruins of so many deserted villages, once the homes of happy and contented people, was indescribably saddening. Where now were those who built them and cultivated the surrounding fields? Where? Driven off as slaves. . . . Africa is bleeding out her life-blood at every pore. A rich country, requiring labour only to render it one of the greatest producers in the world, is having its population—already far too scanty for its needs—daily depleted by the slave trade and internecine war. Should the present state of affairs be allowed to continue, the country will gradually relapse into jungles and wilds, and will become more and more impenetrable to the merchant and trader."[4]

[1] Quoted Sir F. Lugard, *Dual Mandate*, p. 365.
[2] Lugard, op. cit., p. 366.
[3] *Across Africa*, ii, 136–8.
[4] Cf. i, 209.

The loss of slaves on the march from the interior to the coast was enormous. Never more than one-third, sometimes only one-tenth of the original number, reached their destination.[1]

"No one who has travelled in the Northern Province of Nigeria can fail to be impressed with the devastation to which slavery has given rise. In some districts round the fringes of some of the greatest Emirates between them and the independent pagan centres, are to be found zones extending for miles, sometimes a hundred miles in width and more in length, where the ruins of large walled towns and the traces of long-abandoned cultivation are eloquent of the damage which has been done, of whole populations wiped out, not once, but time after time, all to provide the African currency, slaves. . . . The institution of slavery has been the principal cause that Africa is not more densely populated than it is to-day." [2]

Even domestic slavery often led to an arrested development of the slave, as the slave was too frequently an irresponsible being on much the same footing as his master's cattle. In other cases, however, they became their masters' stewards, and rose to positions of considerable importance.

In 1889 sixteen of the principal nations of the world agreed at Brussels to suppress the internal slave trade. Meanwhile, the extension of European rule in Africa gave effective means for carrying this out. The Imperial British East Africa Company, formed in 1888, helped to bar the great slave route to Zanzibar on the east coast. France annexed between 1883 and 1896 Madagascar, which had been the great receiving depot for slaves, and thus put a serious obstacle in the way of the sea traffic in slaves. When the British took over Uganda and established a Protectorate in Nyasaland, they cut off two great sources of the supply of slaves. Kitchener conquered the Sudan in 1896, and put an end to the slave trade there, i.e. the southward and northward routes were both closed. The eventual extinction of slavery in the British Empire became possible in West Africa after the establishment of the Royal Niger Company in 1886 and the conquest of the

[1] *Cardinal Lavigerie and the African Slave Trade*, R. F. Clark, 1887, p. 260.

[2] C. L. Temple, op. cit., p. 226.

Emirates in Northern Nigeria in 1902–3.[1] Legislation to provide for the abolition of the legal status of slavery was necessary in the territory acquired from the Germans—Tanganyika—and was being drafted in 1921.

In 1856 it was estimated that of the 400,000 persons composing the population of Zanzibar and Pemba two-thirds were slaves. Their number had dwindled to 100,000 by 1897. When the legal status of slavery was abolished in Zanzibar in 1901 there were still 50,000 persons who had not claimed their freedom. By 1909 in order to end slavery compensation for the deprivation of his master's protection was actually paid to any former slave unable to support himself. Thus, an inducement was held out to slaves to claim their freedom before 1911, after which date no compensation was payable.[2] This unwillingness to claim freedom shows that domestic slavery was not in itself a hardship. It was obvious that the abolition of slavery and slave dealing would alter the whole economy of a state and of Africa in particular. It was quite clear that some other form of occupation had to be provided and some other currency introduced in the place of slaves. The efforts of missionaries and merchants have been devoted to developing alternative commodities such as coffee or palm-oil, and to training the native to appreciate agricultural work. Moreover, as the stuff had to be got to market when grown, and in the absence of slaves and draught animals there was no way of doing this at any distance from the coast, it was obvious that other means of transport must be found. A little band of Scotch merchants interested in missionary work formed the African Lakes Company in 1878 to put a steamer on Lake Nyasa to stop the slave trade and provide legitimate commerce by developing the alternative commodities of coffee and tobacco. They did it so successfully that they added a new region to the British Empire and Nyasaland became a Protectorate in 1891.[3] The reason why it has been possible to abolish

[1] Cases of slave dealing are still to be found amongst the tribes to the east of the Niger and the status of slavery is yet recognized and bears a stigma. Every effort has been taken to stamp out the traffic in slaves which breaks out sporadically between Nigeria and the Cameroons. *Rep. Nigeria*, 1921, 1924. "It is satisfactory to report that only twenty reported cases of slave trading were investigated during the past year. Slave trading may be said to be practically extinct." *Report Sudan*, 1923, p. 50.

[2] *Handbook on Kenya Colony and Protectorate*, p. 580.

[3] Placing a steamer on Lake Nyasa is not the easy matter it sounds on paper. The first steamer of thin steel corroded, as something in the water apparently ate into the iron. It was then sheathed in wood, which

the slave trade recently in Nigeria and the Gold Coast has been the development of the trade in palm-oil, palm kernels, and cocoa combined with the railways and the motors to transport the produce. It was not until there was an alternative mode of transport and some other article of value to exchange that there could be real hope of effectually abolishing slavery. Slaves will walk, commodities will not, and commodities need slaves to carry them. Missionaries in their anxiety to stop the slave trade have done a great deal towards making Africa and its possibilities known and have aroused interest in the development of these alternative commodities and the provision of mechanical transport. Africa has been the great field of Protestant missionary effort, just as Central and South America have been the great fields of the Catholic missions.

" The value of missionaries as pioneers of the civilization, which this country seems impelled to extend in some instinctive race movement over the waste uncultivated tracts of the earth, cannot be over-estimated. These pioneers do not stop to ask whether it will pay to venture their lives and their funds in these remote countries. They start on their self-imposed mission without *arrière pensée* ; here they fail, there they succeed ; if they die nobody takes much notice and two men are always ready to supply one man's place. They make all the experiments and others reap the profit. On the results of their researches commerce is able to decide its timid steps and eventually we possess sufficient data on which to determine whether it is right and necessary for the Government to seal with its intervention the work which these missionaries began." [1]

Slavery had been part of the social system in India for centuries, and a considerable slave trade had been carried on both for export and in the interior. Slaves were also imported from East Africa, the Abyssinians being specially prized on account of their faithfulness.[2] The Dutch and the French had both exported considerable numbers of slaves

swelled up, burst and sank the steamer. Then when she was refloated worms ate into the wood. Finally, galvanized steel solved the difficulty. In 1896–7 an extensive fleet of steamers and barges was working on the Upper Shire and Lake Nyasa and one steamer on Lake Tanganyika. Ewing in the discussion on Sir H. Johnson's paper, p. 67. *Proceedings of Royal Colonial Institute*, 1896–7, " England's Work in Central Africa," p. 68.

[1] Sir H. Johnson, " England's Work in Central Africa " : *Proceedings*, 1896–7, p. 95.

[2] *Report on Slavery in India*, 1841, xvi.

from India in the seventeenth and eighteenth centuries, the former requiring them for their plantations in Amboyna and other spice islands and the French for Mauritius. Indian slaves were not costly in the seventeenth century—only 20–40 rupees—while a good horse cost 1,000 rupees.[1] As the English acquired more and more territorial power in India they did their best to put down the traffic. The export of slaves was stopped by Warren Hastings in 1774, for the territory then under British control. In 1790 the export of slaves from Madras was also prohibited. This was extended to the new acquisitions in 1811, and the traffic in human beings by land or sea was prohibited. In 1831 the sea trade was placed under naval surveillance. Slavery in the interior was, however, very prevalent, as parents sold their children in numbers in famine years and adults also sold themselves. The system of debt slavery was common, and there was a good deal of kidnapping. The slavery report of 1841 stated that in Bengal a wealthy Zemindar would have as many as 2,000 slaves, and that between 200 and 250 Zemindars held this number each.[2] In Sylhet the respect in which both Hindus and Mohammedans were held was usually measured by the number of their slaves. The population was said to be one-third slaves in this district. Some of the unfree came from families that had been hereditary slaves for a century past. A long list of prices of slaves is given in the report, 40 rupees still seems to have been an " outside " price, and the cost of slaves ranged from 5–30 rupees for males and from 12–20 rupees for females.[3] Slaves were required for domestic service, as owing to the universal prevalence of marriage it was difficult to get servants in any other way. They were also in demand for the retinue and state of private persons, and as cultivators of the land. The British held inquiries into slavery in India in 1828, 1835, and finally in 1841. The evidence seemed to bring out that domestic slaves were kindly treated, being well fed and clothed, and that instances of cruelty were rare.[4] The " agrestic slaves ", as the cultivating slaves were called, had virtually become serfs, i.e. they cultivated the land, giving part of the produce to their masters, but they could not leave the land, and

[1] Moreland, *Akbar to Aurungzeb*, pp. 77–9.
[2] p. 287.
[3] p. 314.
[4] p. 308.

were sold with it in some parts. The Commissioners considered that the system was much milder than that in Africa, as the slaves were not purchased for purposes of gain, but partly for purposes of display or domestic use, and much of the slavery was voluntary. There was no trace of slave hunts and inter-tribal struggles to obtain slaves that devastated Africa. With the tsetse fly and the much greater obstacles in the way of transport in Africa, slaves had a value for porterage that they did not have in India. The late development of railways in Africa also tended to prolong slavery there. After 1843 the legal status of slavery was abolished in British India, but the slaves remained in much the same position as before, and did not claim their freedom as there were no better prospects for them if they became free. Then after 1857 the era of railway building began and created such a demand for workmen as had never previously been known. On the borders of the Santal territories in Bengal no less than 100,000 men were required. Contractors sent recruiters to every fair, and capital set out to search for labour. Those who enlisted for railway work came back with girdles full of coin and their women covered with jewellery. Every man, woman, and child could get work, even boys of ten earned higher wages than grown men in the villages. In these circumstances the advantages to the slave of being free became obvious. The railways gave him a chance of rising in the world. The result was that he claimed his freedom and the British Government supported the claim according to the legislation of 1843.

"The demand for workmen on the railways completely changed the relation of labour to capital. Not many years before it had been a good thing for a Santal to be the serf of a powerful master, but now he could earn a competence as a free man. The natural reason for slavery—to wit the absence of a wage fund for free workmen—was no longer felt and slavery itself disappeared. To a person on the spot it seems that the railways' chief mission in India has been not so much to aggrandize our own race as to restore the balance between labour and capital among the native population and to root out slavery from the land." [1]

The railways opened alternative employment not merely in making them but in working them, they enabled people to move to other parts or to towns. The irrigation works,

[1] Hunter, *Annals of Rural Bengal*, p. 280.

the building of docks, barracks, and other public works, the new sanitary measures for the towns, all these opened up new chances. Those who remained behind would not stay on the old terms. In other words, the railways started the ball rolling and slavery died out in a generation in British India; the slave either became a cultivator of the soil whom his ex-master desired to keep by offering better terms, or he migrated as a coolie to the British colonies, or became a labourer on the great constructional works or in the coal mines.

In Ceylon the legal abolition of slavery was accomplished in quite a simple manner. In 1818 all slaves in Ceylon had to be registered, and this constituted a title to the slave. In 1837 an ordinance was issued saying that all slaves were to be re-registered, and that a charge was to be made for the registration which had to be done again every three years. Unless the slave were registered he was a free man. No one took the trouble to register, and slavery automatically ceased.[1] There is no doubt that the slaves did not know at the time that they could claim their freedom, and that the institution went on, but as the plantations developed, and the railways and docks afforded a chance of new employment, the slave would get to hear of his rights from recruiters of labour. Then he would know that he could assert his freedom if he chose.[2]

In Malaya the system of debt slavery provided the chief labour force. No one ever had a hired servant or ever paid wages. When a river had to be cleared, or boats manned, forced labour was recruited through the village headman.

[1] Despatches about slavery in Ceylon contained in *Report*, 1843, lviii.

[2] A missionary, Dr. Spence Hardy, who worked in Ceylon between 1825 and 1847, and who returned to the island, wrote in 1863 of the enormous change he observed. He imagines a Sinhalese returning after fifty years, and said that he would "scarcely believe his eyes, and would have some difficulty about his ears". He would see youths formerly bareheaded and barefooted covered with caps, stockings, and shoes. "He would wonder where all the tiles came from for so many houses, and would think that the high caste families must have multiplied amazingly for them to require so many stately mansions. In the bazaar he would stare at the policemen, the potatoes and the loaves of bread, and a hundred other things no bazaar ever saw in his day. He would listen incredulously when told that there is no forced labour and no fish tax, and that you can cut down a cinnamon tree in your own garden without having to pay a fine." "One Hundred Years of British Rule in Ceylon": *J.R. Col. Institute Proceedings*, 1895–6, pp. 341–2. This extract seems to show that slavery and forced labour had disappeared by 1860, and that there was a general increase in prosperity. The slaves in the service of the Kandian chiefs were probably not affected at this time.

No payment was made, though the labourers were supposed to be fed, but this was not always done.

In the case of the persons forcibly detained as slave debtors there was very often no real debt; a person in power either invented an obligation or inflicted a fine for an imaginary offence, and then compelled the debtor with his wife and family to enter the supposed creditor's service and treated them all as slaves. The debt slaves were inherited, and the debt was never extinguished, the labour of the debtor not being counted towards the reduction of the debt. Everyone of any position had debt slaves, sometimes Africans were bought as well. If a free man or woman married a debt slave, the free person became bond and the children also. The debt slaves could be sold or even killed at the master's pleasure. In 1884 the practice was abolished in Perak, and it is curious to read that "a certain number of manumitted received the news of their freedom with regret and hardly knew what to do with their new-found liberty".[1]

As the British influence has extended to other states, the system of debt slavery has been abolished. This was done in Pahang in 1906[2] and in Perlis in 1909,[3] and for the rest of the protected Malay States in 1920.[4] In this case the immigration of the Chinese filled the gap as the Malay, once free, would not exert himself as a hired labourer.

The same thing was noticeable in Assam. The effect of the abolition of the legal status of slavery was to cut off the supply of labour and almost to destroy the province. So great had been the stigma of slavery that work was considered derogatory. The roads were no longer maintained, and were washed away in the rains or became overgrown with jungle. The river embankments fell into decay, and the surrounding lands were swamps. When the tea plantations were started, coolies had to be imported from other parts of India, as native labour could not be obtained.[5]

Compulsory Labour and Contract Labour

The British having freed the slave or provided for the gradual extinction of slavery, have also been very successful in putting an end to inter-tribal wars. This has often meant

[1] Swettenham, *Malaya*, pp. 141–3, 195–6.
[2] *Cd.* 3741, p. 83.
[3] *Report of the Adviser to the Perlis Government*, *Cd.* 5389, p. 62.
[4] *Cmd.* 470, 1920.
[5] Sir C. Lyall, "Assam": *J.R. Soc. Arts*, 1903, p. 623.

that the native, without compulsion or incentive to work and deprived of the exhilarating but uneconomical pursuit of fighting, has taken to drinking or quarrelling. In the case of Melanesia it even seems that he is apt to die from sheer boredom. Work is necessary for human well-being, and the English rule is sometimes criticized as not applying sufficient compulsion to induce the freed slave to earn his living by some exertion on his part. It is certain that the Javanese are increasing in number under Dutch methods. So much has the habit of work been inculcated by the Dutch that the peasants are emigrating from Sumatra to take up land and cultivate rubber in Malaya, and that the Javanese supply some of the labour required on the plantations of Malaya. The British Malay, however, is not found either in the tin mines or on the plantations.

Opinions differ as to whether the negro is or is not naturally industrious. Sir Frederick Lugard with his unique knowledge seems to regard him as unusually hard-working. "It is the tradition of Africa that the men tend the cattle and fight while the women work in the fields, but throughout the greater part of the continent the men share the field work with the women and in many districts do by far the larger part of it. The cattle-owning tribes had to be ready at any moment to fight for their herds and thus it was the task of the men to tend them." [1] The labour expended in collecting and preparing for export some £4,000,000 worth of palm-oil for export and £1,500,000 of ground nuts must be prodigious. It seems to be all a matter of incentive.[2] The real difficulty is that the bulk of the negroes have no need to work. "Whereas the European labourer is faced with the struggle for existence, the African native is protected by economic conditions. Each tribesman is entitled to a share of the communal land, forest, and grazing, and obtains without difficulty sustenance for himself and his family. Work is regarded primarily as a means of purchasing the luxuries which acquaintance with civilization makes desirable, and not as a means of actual livelihood. The native labourer works for only a portion of the year, if at all, and can and does move from employment where conditions do not suit him, whether for climatic or disciplinary reasons, to a more congenial occupation." [3] It was not a question of

[1] *Dual Mandate*, p. 401.

[2] Orr, *The Making of Nigeria*, p. 216, agrees with Sir F. Lugard. He speaks of the African native as "surprisingly industrious".

[3] "Report on Tanganyika Territory," 1921, p. 11. *Cmd.* 1732.

pay, for when he was given higher wages it often meant that he worked less,[1] having gained all he required in a shorter period.

With the increase of male population owing to the cessation of war the native in Africa has now to work longer to be able to buy a wife before he can take life easy. It is possible that great changes may be effected by the gradual spread of the plough in Africa. Ploughing is a man's job, as he habitually looks after the cattle. Indeed, in South Africa, so greatly is this fact appreciated that a man with a plough is much sought after and has his pick among the ladies, many of whom absolutely refuse to marry a man without a plough in the absence of which she does the hoeing.

It may, however, be necessary or desirable for the native to have to learn to work through compulsion, so as to train him in habits of industry as Europeans were trained by centuries of serfdom. Work is part of the discipline of life. It may also be desirable in the interests of the community that men should take their part in repairing the roads or clearing the sudd out of the creeks, or helping to remove the village rubbish lest it become offensive to health.

To make the native work, taxation is resorted to in some colonies, so that he must earn to pay his taxes. The Glen Grey Act in Cape Colony provided for the taking of a tax of 10*s*. a year from all adult natives not being landholders, unless they could show that they had spent three months outside their reservation in regular employment. The hut tax of Rhodesia, Natal, and the Transvaal is intended to operate in the same way, i.e. to force the native to earn money. In other parts there is a system of *corvée* or forced labour, i.e. of a tax in kind, and this was justified, as regards Matabeleland, by Mr. Chamberlain as a necessary preliminary training for a warlike people in the arts of peace to which they would not submit without compulsion.

"The corvée existing in Matabeleland was of this nature, that the natives against their will were practically compelled to give a certain time of the year to ordinary industrial labour. It was not the whole of their time but I think it was for three months in the year that the native chiefs had to furnish a certain proportion of labour for the mines . . . When you say to a savage people who have hitherto found their chief employment, occupation and profit in war, 'You shall no longer go to war, tribal war is forbidden,' you have to bring

[1] Cf. India, p. 263.

about some means by which they may earn their living in place of it, and you have to induce them, sooner or later, to adopt the ordinary methods of earning a livelihood by the sweat of their brow. But with a race of this kind I doubt very much if you can do it merely by preaching. I think that something in the nature of inducement, stimulus, or pressure is absolutely necessary if you are to secure a result which is desirable in the interests of humanity and civilization. It is the experience of our own colonies all over Africa, and has been the experience of every other European nation which has had anything to do with African possessions." [1]

Compulsory labour is in force in certain British possessions for road-making, road-repair, for clearing of creeks, and sanitary work. The labour is supplied by, and usually works under, the direction of the chiefs, and is only used in the district from which the labourers are drawn.[2] This work is no more regarded as a hardship than the annual six days' labour on the roads to which the inhabitants of many English parishes were liable till 1835, and the Scotch till 1883.[3] In the German African colonies the natives were compulsorily recruited for work out of their districts, and this was regarded as a great hardship, as they could not sleep or take meals at home.[4]

[1] Chamberlain in House of Commons, 6th May, 1898, p. 597.

[2] According to a return to the House of Commons, *Reports*, 1908, vol. lxx, compulsion of this nature was to be found in Gambia, Ceylon, Leeward Islands, Gold Coast, Nigeria, Uganda, Fiji, British Honduras, Natal, Cyprus.

[3] An interesting example of the difficulty of abolishing compulsory labour was supplied by Egypt. The people of Egypt could not live unless they were supplied with water to irrigate their fields. The water could not be placed on the fields unless the mud which the rise of the Nile leaves at the bottom of the canals was annually removed. For centuries the practice had been to call upon them to remove the mud and flog them till they did it. The British abolished the *corvée* and the flogging with the result that the Egyptians would not remove the mud. It seemed as if it were necessary to flog the Egyptian people to prevent them from starving. Free labour had to be paid and that in the then state of Egyptian finances was to risk bankruptcy as it took £400,000 a year to pay the labour. Only £250,000 could be obtained and it was eight years before the system of forced labour scooping up Nile mud with its fingers could be abolished. Even now the people are called out in times of special need to avoid inundation. Cromer, *Modern Egypt*, chap. 50.

[4] The system of forced labour was also adopted in certain French colonies and attains considerable proportions in the Dutch East Indies where "the natives are obliged to assist without pay in the building and maintenance of roads, dams, waterworks, bridges, and dykes, in doing duty as watchmen and in constructing irrigation works". In Surinam the natives were forbidden to cultivate bananas and existing banana

The scarcity of labour has given rise in some districts to a demand that compulsion should be applied, not for public works but for the sake of the settlers who cannot otherwise get sufficient labour to cultivate their estates in the absence of which, it is claimed, the whole development of the colony is retarded.

The difficulties which arise with regard to the labour supply on big estates are brought out in the following official report of the East African Protectorate for 1904.[1]

"The natives of the Protectorate are, however, as a rule very erratic in their desire for work; for months together labour is as plentiful as one can desire, and then suddenly there is a great scarcity. To a planting community of settlers native labour is a most important factor of success, and it is unfortunate that all our native labour comes from the agricultural tribes, for the reason that the planting and reaping seasons when labour is more required on the natives' own farms, coincide, of course, with the seasons in which the settler requires most labour.

"Until the wants of the natives increase enormously it is difficult to see a remedy for this. It must be clearly understood that at present the natives do not work for subsistence except in periods of famine, but merely to amass enough savings to purchase livestock with which to buy wives. The latter once accomplished there is little incentive to work further until it occurs to them that they would like to purchase an additional wife. There is no doubt that no native is very anxious to perform manual labour outside what is necessary on his own farm, and if he has enough wives he will do very little then; in no part of the Protectorate do natives flock into settlements to apply for labour." The report speaks of the demand being greater than the available supply. "The expression 'available supply' is used advisedly, the native population being undoubtedly sufficiently large to provide adequately for the needs of the Protectorate for many years to come, the proportion willing to work for hire being, however, at present extremely

trees were destroyed. In German East Africa carriers were taxed so as to force the use of pack animals and drive the carriers into agricultural work. Other forms of forcing the native to work are to be found in some of the French colonies. The natives who could not show some visible means of subsistence were run in as "vagrants". In Algeria natives who had their lands confiscated were thus forced into the labour market. Reinsch, op. cit., p. 378. Also *Cd.* 9146, Report on the Natives of South-West Africa and their treatment by Germany.

[1] p. 21.

small. There is no doubt at present that the native labour of the country is very erratic and unreliable, a fact likely to hamper rapid agricultural development for some years to come."

The question arose in an acute form after the war. White settlers had been attracted largely by Government inducements to the newly named Kenya colony—the old British East Africa—and found the labour supply insufficient. Compulsion had been applied to obtain carriers during the war, and it was suggested that a certain amount of pressure should be brought to bear on those natives who had no visible occupation to induce them to take up paid work for the Government on railways and other public works. Accordingly a circular was issued, urging Government officials in native areas to exercise " every possible lawful influence to induce able-bodied male natives to go into the labour field. Native chiefs and elders must at all times render all possible lawful assistance on the foregoing lines. They should be repeatedly reminded that it is part of their duty to advise and encourage all unemployed young men in the areas under their jurisdiction to go out and work on plantations ". Those chiefs who were not " helpful " were to be reported.[1]

In the debate in the House of Lords on this circular the official view towards compulsion was stated. Lord Milner quoted Sir E. Northey, the governor, on the necessity of training the native through some system of supervised compulsion.[2] " His work under good European supervision and with proper training is many times more productive than it is when left to his own methods, and he improves physically and mentally more quickly with regular work and healthy exercise. Left to his own resources he does little work. He makes his women and children do it for him. Left alone the majority of the adult men in the native reserves live a miserable life of idleness, drunkenness and vice. Encouraged and taught to work, he soon sees the advantage of earning money, lives better, becomes more intelligent, and dresses himself more decently. For the good of the Empire which requires our raw materials, for the good of the Protectorate which must advance along progressive lines, and for the good of the native whom we must protect, I am convinced that we must do all that is justly and legally

[1] Quoted in Debate in House of Lords, 14th July, 1920, *Hansard*, p. 125.
[2] Ib., p. 156.

possible to encourage and induce the native to come out and work."

The Bishops of Mombasa, Uganda, and the chief of the Scottish Church also advocated compulsory labour under carefully restricted conditions, preferably for public services.

The native was to be employed on public works, was only to be forced to work for 60 days and not then if he were fully employed on his own farm, or could show that in the previous year he had had three months' employment. Inspectors of labour were appointed to examine the contracts and the conditions under which the labourers lived, and themselves were to take up any case on behalf of the native.[1] In addition medical officers were appointed to inspect the health, food, and housing of the recruited man, and they could discharge a man or send him back.

Lord Milner said: "There is absolutely no difference of opinion between administrators, those who have lived long in the country, and above all the missionaries" as to the vital importance to the natives themselves of encouraging them to more steady and continuous industry.

In the Union of South Africa another plan was resorted to, namely, that of the labour contract. Labourers were recruited for a term of six months or a year for the gold or diamond mines. They were generally confined to a special compound, and penalties were enforced by the Government for breach of the contract. The labourers were recruited not merely from Cape Colony and Natal, but from districts as far off as Portuguese East Africa and Nyasaland. As the natives from this latter place could not stand the change from the Equator to the high veld, where they developed pneumonia, recruiting in this region was prohibited. From a third to a half of the labour for the Rand mines, in 1920, 92,451 out of 284,169[2] persons, has come since 1905 under contract from Portuguese East Africa, the rest from the Union and British Native States. In return for allowing Portuguese negroes to migrate in such numbers the Union had to send a large proportion of its traffic over the Portuguese lines to Delagoa Bay. This shows the strangle-hold a region possesses which has a surplus labour supply over a region which is deficient in that respect.

[1] Ib., p. 159. For further particulars and limitations see section on Kenya.

[2] *Official Year Book*, 1921, p. 453.

Indian and Chinese Coolie Labour

Where there was a lack of labour either because the tribes were too few or because the native could live on his holding and did not want to work for other people, labour was imported in many British tropical colonies. The question of forcing or inducing the available labour to come on to the market, or of importing it, has occupied all the European governments that have interests in Africa.

" It seems to be an undeniable fact that in tropical climates where the needs of the indigenous population are few and simple, and where there is an abundance of fertile land open to the use of that population for the satisfaction of those needs, it is impossible to obtain from local sources except by compulsion a sufficient supply of labour for the development of industries dependent on steady and continuous work. Wherever these climatic and economical conditions prevail, recourse must be had for the prosecution of such industries, to the introduction of some alien race whose previous traditions and methods of life have inculcated habits of steady and regular work." [1]

Indian coolies have been brought during the nineteenth century to the British West Indies, including British Guiana and Honduras, to Natal, East Africa, Malaya, and Fiji. They went of their own accord to Australia and Kenya. The Chinese also migrated to Malaya, North Borneo, Australia, and British Columbia, and were also imported to a limited extent for the British West Indies.

Under European supervision Indian imported labourers developed the coffee, tea, wattle, and fruit growing of Natal, they have been largely responsible for the continued production of sugar, as well as for the cocoa, sugar, and fruit growing of many of the West Indian islands and for the development of rice in British Guiana. The sugar production of Fiji and Mauritius rested on Indian labour, as did also the coffee and tea of Ceylon. As the tea plantations of Assam were carved out of waste land, the population was insufficient to supply the labour required, and it was recruited from other parts of India. The great tea industry of India was therefore the outcome of indentured coolie labour and European capital. While the Chinese created a new and prosperous Malaya with their tin-mining, and were also interested in rubber, the Indians have furnished the bulk of

[1] " Report on Emigration from India " : *Cd.* 5192, p. 21, § 85.

the labour required by the plantations in the Federated Malay States. Racially, the Indian is more suited to plantation work than the Chinaman, as he takes his family with him and they are available in the busy time for fruit picking or stripping the leaves of the tea plant. The Chinese being the sturdier labourer is of great value in the mining industry, but he is more difficult to control than the Indian, being under the orders of his guild or secret society. The Chinese woman is left at home to continue the ancestral worship. It is often not sufficiently recognized that there have been two great colonizing movements in the nineteenth century. The movement of the Europeans to fill up the manless lands of the New World has been largely advertised. But the importance of this migration of Chinese and Indian emigrants who have created new colonial values, made whole regions of the British Tropics into paying assets, and created within the British Empire a new Indian Empire in the British West Indies and a new Chinese Empire in the British Straits Settlements, has scarcely yet been recognized.

The importation of Indian coolies began almost immediately after the freeing of slaves. They were brought first of all to Mauritius in 1834. The British people, having paid 20 millions sterling to free the slaves, were not going to have slavery crop up under another name, and so the emigration of indentured labourers was stopped in 1837 until a thorough inquiry had been held and proper safeguards devised. It recommenced in 1842 and gave rise to an elaborate code designed to protect the emigrant from improper recruiting and to secure his comfort and welfare on arrival.[1] Usually, coolies were indentured for five years and served another five as free labourers. After that they got in most colonies either a free return passage or were allowed facilities for settling on the land. While the necessity for imported labour arose out of the freeing of the slaves, the immigration move-

[1] The dates at which coolie emigration from India to the various colonies was permitted are as follows: 1844, Jamaica, British Guiana, and Trinidad; 1847, Ceylon; 1858, St. Lucia; 1860, St. Vincent, Natal, and St. Kitts; 1867, Grenada. After the freeing of her slaves in 1848 France began to recruit coolies in India for her colonies, but the Indian Government was not satisfied with the conditions and stopped the emigration. Surinam, where emigration was permitted in 1872, was the only foreign colony to which Indian emigrants were allowed to go prior to 1921. Emigration to Natal was prohibited in 1911. Commissions of inquiry were held into the conditions prevailing in British Guiana, Natal, and Mauritius in 1872, and on other occasions since that date.

ment soon extended to other colonies, where labour was insufficient either because the population was not dense enough or because it felt no economic pressure to work.

The Indian labourers were recruited by headmen or *Kanganis* for the plantations of Ceylon, Assam, and the Straits Settlements. Associations such as the "Coast Labour Agency" existed which advanced these headmen the necessary money to extinguish the debts of the would-be labourers, to pay their passage and feed and clothe them till they arrived on the plantations.

In other cases the distance was too great for successful recruiting through a private agency or headmen. It was then the practice for the governments of the colonies that required this labour, themselves to act as recruiting agents. It was in this way that British Guiana, Trinidad, and Jamaica obtained their coolies in the past.

It is necessary to distinguish between three types of regions as far as Asiatic immigration is concerned. In Ceylon and Malaya the emigrants were relatively speaking near home, it partook more of a migration within a country than an emigration which meant temporary exile. This latter was the type of emigration to the West Indies. But in both these regions the coolie was eagerly welcomed. In the third region of migration, viz. to the self-governing dominions and to East Africa, parts of which were suitable for colonization by the white man, the presence of the Indian was, and is, fiercely resented. Strenuous efforts to obtain Indians and strenuous efforts to keep them out are both found in different parts of the Empire.

In the near-by region of Ceylon the Government contributed towards the expense of recruiting this labour, paid for quarantine camps and carried the labour on the railways for half the third-class fare.[1] In Ceylon the labourers, who amounted to about 600,000 in 1917, when an inquiry was undertaken, were said to be rarely out of debt, but the *Kanganis* made money.[2] In Malaya three systems existed side by side, indentured labour, *Kangani*-recruited and free immigrant labour. This latter was often assisted in various ways. The *Kanganis* provided the bulk of the labour required but the coolies did not remain permanently in debt as in Ceylon, and their wages were higher. They also

[1] *Report* by Sir H. A. Blake on Ceylon, 1907.
[2] *Report* by N. E. Majoribanks and Mr. Marakaya for the Indian Government on conditions of Indian labour in Ceylon and Malaya.

seem to have made savings. The number in Malaya was estimated to be 267,170. Indian labourers were not merely employed by the planters, but also by the Government on road, railway, and canal works. They were recruited originally for the sugar and coffee estates, but came in far larger numbers when rubber displaced the first two. They provided 60 per cent of the labour on plantations, 25 per cent being Chinese. The last indenture expired in 1913, and since that date the labour has been either *Kangani*-recruited or free labour.[1] If a native did not like the conditions he could, and did, desert in both colonies. No less than 40,028 deserted in 1915 in the Malay States, and this operated in favour of good conditions as it operated in Russia before 1865, where the serfs, if intolerably treated, simply bolted. In no case does it pay to recruit expensive labour and then have it disappear. Thus, it was up to the planter to make the conditions attractive if he wished to keep his labour in colonies where it is easy to get back home.

But this was not their only safeguard. Protectors of emigrants were appointed in India by the Government to supervise the conditions of embarkation, the seaworthiness of the ship, the space, decency, medical attention, and food supply of the indentured labourer. This was particularly necessary for the more distant colonies. Protectors also existed in the colonies to see to the proper treatment of the labourers on the estates. The Government of India has refused on several occasions to allow coolies to proceed to colonies that did not conform with its requirements as to their welfare, and the practice grew up for colonial governments to submit any ordinances about coolies to the Government of India for its approval. In addition the Indian Government has sent round from time to time its official representatives to inspect the conditions under which the coolies work.[2]

The general effect of this migration of Indians has been, as we have already seen, beneficial to the cultures on which

[1] It was found on inquiry that the percentage of deaths was much higher among indentured labourers than among free Indian labourers even on the same plantations under the same conditions. This was ascribed to a certain psychological effect of indenture. The indentured man felt himself inferior to the free man, he was paid less and could not leave as the free man could, and he was apt to resent this and die from sheer dispiritedness.

[2] See *Reports* on Ceylon and Malaya already quoted, also *Cd.* 5192 (1910) and *Cd.* 7745 (1915).

the prosperity of these tropical colonies rest. It may also be gauged from the fact that the annual average of exports per head is much larger in those colonies which have a considerable number of indentured labourers, which seems to prove the greater efficiency of output under this system.

Mr. Alleyne Ireland made a calculation for the years 1882–91.[1] In one class of colony, St. Lucia, St. Vincent, Montserrat, and Dominica, where there was neither pressure of population nor imported contract labour, the exports per head worked out at an average of £2 15*s.* 3*d.* per annum. In a second group where there was considerable pressure of population and no spare land, i.e. in Barbados, Antigua, St. Kitts, Nevis, and Grenada, the exports were about double, viz. £5 11*s.* 5*d.* In British Guiana, Trinidad, Mauritius, and Jamaica, for which imported labour had been obtained in large quantities, the exports were £7 15*s.* 9*d.* per head.

That the system has also benefited the emigrant is indisputable. "The evidence before us leaves no room for doubt but that the large majority of the immigrants who stay on in the colonies succeed in life. Many of them acquire land, others engage in retail trading, and in miscellaneous occupations. The contrast between their position in the colonies and that which would have been within their reach if they had remained at home is generally striking . . . It may confidently be stated that as a general rule the immigrants in all the colonies to which they go improve in health, strength, and independence of character . . . and attain to a position far superior to that from which they have emerged." [2]

[1] *Tropical Colonization*, pp. 161–3.

[2] *Cd.* 5192, p. 14, § 51. See "Report to the Government of India on the Condition of Indian Immigrants in four British Colonies and Surinam", by J. McNeill and Chin-man Lal, 1915, *Cd.* 7745.

The Commissioners consider that the advantages to the Indian immigrant have far outweighed its disadvantages. "The great majority of emigrants exchanged grinding poverty with practically no hope of betterment for a condition varying from simple but secure comfort to solid prosperity. Emigrants live under very much better conditions than their relatives in India and have had opportunities of prospering which exceeded their own wildest hopes. They became citizens of the country to which they emigrated and both they and their descendants have attained to positions commanding general respect and consideration . . . If too many labourers were judicially punished all but the most worthless were gainers in skill, enterprise, and self-respect. The savings or remittances of the industrious represent only the material gain to the emigrants . . . Following the example of the great majority of the emigrants themselves and their descendants we regard it rather as a system of colonization

In Trinidad Indians had bought land worth £72,000 in ten years, according to the report of 1915,[1] the annual deposits by Indians in the Government savings banks were £80,000, and the annual remittances £3,000. Some acquired incomes of £500, £1,000, and even £2,000 a year. These were men recruited from the poorest classes in the congested districts of the United Provinces and Bihar with a daily wage of two annas a day. Once transplanted they were cured of hookworm and became more and more efficient with the discipline of steady work. Removed from the hampering factors of caste and family obligations they learned a new standard of life and work.

While the introduction of coolie labourers into the tropical Crown colonies has been a success both for those colonies and the Indian emigrants, difficulties have arisen with regard to their migration to the self-governing colonies and to British East Africa (Kenya), a Crown colony with a large white population. This has led to a clash between the white and the coloured portions of the British Empire. It has not merely been a question of excluding Asiatic immigrants, but an acute controversy has arisen over the status of Indians already domiciled in the colony, and this has specially affected South and East Africa, where there is a large Asiatic population born in Africa, and which regards Africa as its home. It is fundamentally a clash of two civilizations. The four main questions are : Shall the Asiatics be allowed to vote ? Shall they be allowed to acquire land ? Shall they be allowed to trade ? Shall they be segregated for purposes of the health of the community ?

The articulate educated minority of India fiercely resents the exclusion of their compatriots and the slur implied when Indians domiciled in Africa are treated as undesirables, unfit to vote, and herded off by themselves for sanitary reasons, restricted as to their trade, and hampered as to land holding when not actually forbidden to own land.

It all comes down to the question as to whether certain races are inferior and mixtures undesirable. The exclusion of Indians implies this, and it raises a fury of protest on the

under which poor but industrious Indians, whether landless labourers or the sons of poor cultivating landowners who are content to be trained and acclimatized under private employers in need of a steady supply of labour, are offered prospects much more favourable than they could hope to realize at home."

[1] *Cd.* 7745.

part of the educated Indian subjects of His Majesty who resent the assumption of inferiority which underlies the legislation.[1]

A further complicating factor has arisen from the fact that in non-British territories such as Mozambique and Tanganyika, when under the Germans, the Indians were admitted freely and traded freely. Only under the British flag, it is claimed, is there no place for them, and yet they are British citizens.

"The Indian's position within the Empire is, in fact, peculiar. Alone among its non-white races he possesses a civilization which is capable of intelligent enterprise and yet is not that civilization which rules the white Dominions. India is no longer content with a subordinate position. Like other nations when they begin to be conscious of nationality, she aspires to enterprise in foreign lands, and not unnaturally she resents any restriction on her freedom of action unless it is equally applied to other nationalities."[2] The real trouble is not the position of a few Indian immigrants in Africa—less than 200,000 in fact. It is the claim of the Indian Empire of 319 millions to equality of status and free migration, and this is denied them at present in all the self-governing colonies, and even in one Crown colony, Kenya. In Mozambique and in Tanganyika, under the League of Nations, this status is recognized, but Tanganyika is not suitable for European racial colonization.

Australia, chiefly out of opposition to Chinese labour, began to develop a policy of "White Australia", and as such wished to exclude all non-European peoples whether Kanakas, Japanese, Chinese, or Indian subjects. Their entrance was limited by heavy poll taxes and by restrictions imposed on the captains of ships, only one Asiatic being allowed to a certain proportion of tonnage. They were more effectively excluded by an education test adopted from Natal in 1897.[3]

In Canada, apart from the climate, which does not invite settlement from India, the doctrine was evolved in 1910 that a man could only come on a continuous voyage, and as ships from India did not go direct to British Columbia, this

[1] On the subject of race mixtures and racial inferiority see Stoddard, *Rising Tide of Colour*.

[2] *Round Table*, "Kenya," June, 1923, p. 518.

[3] In 1911 there were 20,775 Chinese, 0·47 per cent of the population, and 6,644 Indians, ·15 per cent in all Australia. *Official Year Book of Australia*.

was a bar on immigration. On the other hand, Japanese and Chinese were admitted in considerable numbers.[1]

Natal, a tropical region, had, however, recruited Indian coolies under indenture from 1860 and was at one time most anxious to have them for the sugar, tea, and wattle plantations. The immigration, stopped in 1866, was resumed in 1874, as so many labourers were drawn off to the diamond mines and afterwards to the gold mines. Indeed, between 1874 and 1894 the Government contributed £10,000 a year towards bringing in coolies. They were allowed to settle and did so in large numbers. Natal got self-government in 1893, and the colonists began to be afraid of being submerged by Indians, and at Durban in 1896–7 the people refused to let them land. The education test for exclusion was then evolved. As the planters claimed that they could not do without coolie labour the coolies were still brought in under indenture, with repatriation after the expiry of the indenture, and this lasted till 1911 when emigration to Natal was stopped by the Government of India. One stream of these coolies came from Upper India through Calcutta and the other from Madras. The majority settled in the country after their indentures had expired and were either employed as free labourers by the planters and farmers or became market gardeners. Few of these colonial-born Indians have ever seen India, and Africa has become their home. In 1919 in Natal more than half of the Indians had been born there, and the Indian population exceeds the white at present. Licences to trade are granted to Indians in Natal, they are allowed to own land, and there is also a municipal, but not a parliamentary, franchise for Indians, but there is a considerable agitation at present (1923) to restrict these privileges.[2]

In Cape Colony the Asiatics possess both parliamentary and municipal franchise, but in the Transvaal and the Orange Free State they have neither. In Cape Colony as in Natal

[1] The total number of Hindu immigrants from 1901 to 1922 was only 5,320 and only 137 have entered since the Immigration Law of 1910. The colony only contains 1,100 Hindus altogether. In the period 1910–22 38,727 Chinese were admitted and 8,469 Japanese. *Canadian Year Book*, 1921, p. 131.

[2] An American, Stoddard, points to Natal and says that the colony tends to the type of Trinidad or Cuba rather than to that of a white dominion. Wages are cut to the Asiatic level and the working-class European has to go. He also points to Mauritius and Hawaii for similar happenings. Op. cit., pp. 278–80. See also pp. 259–301 for race mixture.

they have been permitted to trade and own land, but in the Transvaal they are not allowed to own land, and their trading powers have been hampered by the refusal of licences to trade. In the Orange Free State they can neither own land nor trade, and they are practically debarred from entering or residing in that province.

In the wake of the indentured labourer in Natal came the trader, who was generally a Mohammedan from the Bombay Presidency, chiefly Surat. With the opening of the Rand and the gold rush of 1886 they spread into the Transvaal and continued to trade successfully there. There were in 1921 approximately 152,000 Indians in South Africa, of whom by far the larger part were in the Transvaal and Natal. The coolie class were in the fruit and vegetable business, or were hawkers, waiters, or servants, but the Bombay Mohammedan was an astute business man, who could hold his own against European competitors. Some of them became wealthy merchants in Johannesburg, with branch houses in country districts. They undertook all kinds of business and were formidable competitors to the European trader.[1] Thus, a widespread agitation grew up amongst the whites against the so-called " Asiatic menace ".

The white man in Africa will not do manual labour, that is " nigger's work ", and therefore, in theory, the posts involving superintendence, trading, farming, planting, banking, contracting, engineering, accounting, clerking, or professional work are white men's jobs. And here especially in the matter of moneylending and trading strikes in the Mohammedan. He can live on a few shillings a month, " the smell of an oil-rag," as it has been termed, he can undersell, he is said to be not over-scrupulous in weight or quality, and he can clear out the white man by these means from the only middle-class employments that he is at liberty to engage in and drive him out of Africa as the brown rat drove out the black rat in Britain. He " under-lives ", that is his economic crime, and he now claims equality, that is his social crime. This seems to be the general trend of South African opinion.

[1] The number of Asiatics according to the Asiatic Inquiry Commission were :—

Transvaal . .	11,072	(1,000 Chinese)
Cape . . .	7,690	
Natal . . .	133,439	
Orange Free State	108	
	152,309	

Although the Transvaal, where the Boer was never very tolerant of colour in any sense, was averse to Asiatics, the laws were not strictly enforced against them before the Boer War, due, it was said, to pressure from the British Government.

A large influx of Asiatics followed after the Boer War (1899–1902), and attempts were made to segregate them in locations for residence and trading. A decision of the Courts, however, declared in effect that the Indians were as free to reside and trade as the British and Dutch (Motan's case). The next step, then, was to restrict their immigration, and it was proposed in 1906 to make this effective by compulsory registration of all Asiatics and their identification by finger-prints. But this was not carried out.

Responsible government being given to the Transvaal in 1906, the colonists began to deal with the matter themselves by restricting the immigration and trade of the Indians. They were met by a passive resistance movement organized from India. It had become an Imperial question and the self-governing and tropical Empires clashed. Nevertheless in the Transvaal an Act of 1908 insisted on the registration of all Asiatics, which meant that non-registered persons could be "spotted" and ejected or prevented from trading. It also limited their trading rights in the future by prohibiting the granting to Indians of stands to trade on the diggings.

In 1913 under the General Immigrants Regulation Act of that year, all further Asiatic immigration into the whole Union was stopped, and the position of Indians already residing within the Union was supposed to be settled by an agreement in that year between Messrs. Smuts and Ghandi, the gist of which seemed to be that those Indians who had already acquired trading rights or land might keep their privileges, but that no further trading licences would be issued to Indians nor would land ownership on the part of Indians in the Transvaal be tolerated.

About 1914, in order to evade the law of 1885, which prohibited Indians from holding land, they began to form limited liability companies to acquire land and this procedure was declared to be legal by the Courts.[1] In 1919 a law was

[1] Three companies existed in 1913 with £7,500 capital, in 1918 one hundred and fourteen with £113,000. *Union Year Book*, 1920, p. 172.

passed prohibiting future companies formed by Indians from owning land, and declaring that no more land in the Transvaal should in future be acquired by the existing Indian companies, and that, while licences to Indians to trade were prohibited by the law of 1908, those Indians who already owned stands might continue to exercise the right of trading as long as they carried on business on the same stand or on a stand in the same township as in May, 1919. No future stands would, however, be legal under the Transvaal Act of 1908.

In 1920 it was claimed by many that the Indian population was increasing, that the immigration laws were evaded in a wholesale manner, and a new agitation arose demanding that all Asiatics should be repatriated. The result was that a commission was appointed in 1921 to go into the whole question.[1] While it was proved that there was a great deal of exaggeration, there was no doubt that the competition was keen and the Asiatic trading rivalry formidable. In the Transvaal the total Asiatic population was only $2\frac{1}{2}$ per cent of the European, but it was mostly engaged in trade.

" On the whole their scale of remuneration was proved to be undoubtedly lower than that prevailing in European businesses, and that they do undersell European traders to a considerable extent cannot be refuted. In doing so they are regarded by some Europeans as of great benefit to the public, especially to the poorer class of whites and to natives." As bankers and pedlars they travel into outlying parts of the country and supply the wants of isolated farmers who are far removed from access to the centres of trade. Appeals were made, in fact, to the Commission by members of the farming community not to interfere with the trading rights of Asiatics in country districts, as the farmers would be left at the mercy of alien European traders who were said to be far worse.[2]

The report of the Commission was to the effect that there should be no compulsory repatriation ; this was impossible when so many Indians were colonial-born. Voluntary repatriation was, however, to be encouraged, and 5,400 have been repatriated in three years. No compulsory segregation was recommended, but voluntary segregation was to be encouraged with residential areas laid out in attractive spots. It was also recommended that certain

[1] *Asiatic Inquiry Commission*, 1921, U.G. 4'21.
[2] *Report*, 1921, op. cit., p. 31.

portions of the town should be set apart for Asiatic traders. A special official to enforce the law was recommended, and a further recommendation was added that Indians should only be allowed to own land within twenty to thirty miles of the coast of Natal. That meant, of course, that the rest of the land should be reserved for Europeans and negroes. These recommendations have not yet been carried into effect.

While the question was a burning one in South Africa, the agitation spread to India, where great capital was made out of it. The question came up at the war conference of 1918, and it was then agreed that each self-governing colony, including India, should determine the character of its own population and could restrict immigration if it chose. But concessions were made in that tourists, for pleasure or commerce, were allowed free access, and that Indian settlers in British colonies were to be allowed to bring in one lawful wife and minor children.

At the Imperial conference of 1921 the question arose not over immigration but over the domiciled Indians, and while the other colonies were willing to grant them the franchise South Africa dissented.

The controversy became acute over another part of East Africa—Kenya.[1] The highlands are suitable for Europeans, who were deliberately encouraged to settle in 1902, and this area was reserved for them in 1908. The ownership of lands in the highlands, between 4,000 and 9,000 feet, was limited to Europeans. These amount to 50,000 square miles or one-tenth of the colony and Protectorate, a white island, in fact. After the war, soldier settlers were actually attracted there by the Government to the number of 1,000, and altogether the European population in 1923 was 9,651. The Indians, however, amounted to 22,822, and the natives to between two and a half to three millions. Kenya was not an independent dominion but a colony under the British Crown, only just beginning to pay its way. The Indians claimed the franchise, in which case they would have outvoted the English, and have been in command of the natives who had deliberately placed themselves under the British and not under an oriental race. A medical authority, Professor Simpson, recommended segregation on sanitary grounds, and outbreaks of plague had occurred in the Indian quarters which gave point to this. Residential segregation of a voluntary character

[1] *Indians in Kenya Memorandum*, 1923, *Cmd.* 1922.

had actually been practised for many years but immigration was unrestricted. It was, however, proposed to restrict immigration in the future. One reason alleged was that the Indian would fill the posts that ought to be occupied by the native when he develops and is more educated, otherwise there will be no chance for him to rise in the world. Indians helped to build the Uganda railway, they now man it and the workshops, fill the minor clerical posts, and own many of the shops. They also engaged in money-lending, but were not found in agriculture. They have, therefore, done a good deal to develop the colony to its present state as far as semi-skilled labour of a non-agricultural character is concerned.

While the British Indian claims as a British subject the right to acquire land anywhere in any Crown colony with no segregation, common franchise, and no racial discrimination, on the other hand there is in Kenya the question of converting a British colony with a considerable portion of white men and a large negro population into an Indian dependency. The British discovered the country, the British exchequer bore the financial burden, and it is chiefly by the initiative, technical knowledge, and capital of the British that the colony has been developed. It is true that Indian traders came for centuries to the Zanzibar coast but they did not penetrate inland. The Indian builder and contractor found fresh opportunities when the English Government started the railway, and they penetrated inland only with the English. Nor could the Indians alone control the natives. While again it is very difficult to create a difference of status based on colour when Great Britain has 319 millions of Indian subjects, on the other hand Great Britain is equally a trustee for the African races, and all the non-co-operation, passive resistance, and civil disobedience movements which the Indians developed in the Transvaal would be highly undesirable in a colony where the native races preponderate as they do in Kenya, to say nothing of the probable extension of these methods into Uganda. Nor is it by any means certain that the morals of the Indian are good in other respects for the African. Sir R. Coryndon, Governor of Uganda, said that "the great majority of Indians are petty traders who consider moral scruples in trade to be futile. They are demoralizing to the Baganda".[1] Moreover, there is also the question of

[1] *United Empire*, June, 1920.

Indians acquiring land in what should be the native reserves. It is not merely a question of non-encroachment on the white man's highlands. The Indian does not want to emigrate in large numbers at present but he may wish to do so in the future. Is he then to be permitted to occupy lands into which the African tribes may also wish to expand ?

The English settler felt that he was the real pioneer and determined to maintain his position of ascendancy as the dominant race. The eventual aim of the white settlers was to make Kenya a self-governing colony like Rhodesia. On the other hand, educated Indian opinion had become extraordinarily sensitive to any sign of racial inferiority. Their amour-propre was injured by the fact that it was not proposed to give Indians an equal electoral franchise with the British, that it was proposed to segregate them and possibly to limit their immigration. High-caste Indians, who in India would have considered that the mere shadow of many of the coolies in Kenya would have polluted them, waxed eloquent on the injury to the Indian peoples.

The decision given in 1923 by the Colonial Office was to the effect that the interests of the native Africans were to come first and the trusteeship for them would not be delegated by the Imperial Government. The following official statement marks a stage in the definite recognition of responsibility towards the African. " Primarily Kenya is an African territory, and His Majesty's Government think it necessary definitely to record their considered opinion that the interests of the African natives must be paramount, and that if and when their interests and the interests of the immigrant races should conflict the former should prevail. But in the administration of Kenya His Majesty's Government regard themselves as exercising a trust on behalf of the African population, and they are unable to share or delegate this trust the object of which may be defined as the protection and advancement of the native races. It is not necessary to attempt to elaborate this position ; the lines of development are as yet in certain directions undetermined. . . . But there can be no room for doubt that it is the mission of Great Britain to work continuously for the training and education of the Africans towards a higher intellectual moral and economic level than that which they had reached when the Crown assumed the responsibility for the

administration of this territory."[1] "This paramount duty of trusteeship will continue, as in the past, to be carried out under the Secretary of State for the Colonies by the Agents of the Imperial Government, and by them alone." Self-government was declared to be out of the question "within any period of time which need now be taken into consideration".[2]

The policy of segregation was abandoned as between Europeans and Asiatics. The highlands were reserved for Europeans, but an area of land in the lowlands is to be reserved for a limited period in case Indians wish to settle and develop the land themselves.

While the Imperial Government said that it would not countenance the introduction of any legislation to exclude from a British colony immigrants from any other part of the British Empire, it admitted that some control of immigration was desirable in the interests of the natives in order that there should be some place for the African of both Kenya and Uganda in mechanical and subordinate clerical work and in small trade. The economic position of those Indians who had already settled in the colony would not be affected. It suggested the formation of a board on which the various interests should be represented and which should scrutinize the applications for admission in the economic interests of the natives of both dependencies. Such a board has been appointed and immigration regulations are being drawn up.[3]

The Government of India, incensed at the treatment of its subjects, refused in 1921 to allow them to emigrate to any colony except Ceylon and Malaya, and these exceptions were removed in 1923. On the other hand the Governor in Council might, after the matter had been laid before the legislative council, allow migration in certain cases. At present the colonies such as British Guiana which really desire these immigrants, are preparing attractive schemes of settlement and are offering favourable terms to get from India the labour which they require, and deputations on behalf of India have visited Fiji and British Guiana

[1] *Cmd.* 1922 (1923), p. 10.

[2] A committee was appointed in July, 1924, by the Secretary for the Colonies to recommend the steps necessary to ameliorate the social condition of the natives of East Africa, including economic development and the improvement of health, and also the economic relation between natives and non-natives and the taxation of natives.

[3] *Indians in Kenya*, pp. 17–18.

at the request of the colonial governments to ascertain what conditions would be acceptable to the Indian legislature. In 1923 draft rules were being framed.

The Government of India, on the whole, tends to put more and more obstacles in the way of its labourers emigrating. Labour for the factories in India is scarce, and as it is the ideal of most agricultural countries to become industrial, the tendency is for an Indian nationalist government to desire to direct its people into Indian industrial development. Moreover, as land is being taken up in such small islands as Fiji and Trinidad there is not the same chance of the Indian emigrant becoming a landowner in the near future. In British Guiana there is, however, still ample space.

The problem of Indian migration and of the domiciled Indian in Africa is not a mere local squabble between a few handful of whites and Indians, but it concerns the whole world, the status of India, its position within the Empire, the question of the trusteeship of Britain for the Africans, and the future of the Tropics. It directly affects the development of one continent, the aspirations of another, and the cohesion of the Empire.

The emigration of another class of Asiatics has done a great deal to develop the British Empire, viz. the Chinese.[1] They have gone in large numbers to British Malaya, have been the making of Hong-Kong, and have contributed considerably to the development of British Columbia. They were also transferred to the West Indies, were introduced for a short time into the Transvaal, and migrated in considerable numbers to Australia. Here again the same features are observable, that is to say in some regions they were eagerly welcomed, in others they were jealously excluded. Where there was a clash of two civilizations, as in Australia or in British Columbia, however valuable their economic services might be, the Chinese, like the Indians, were resented.[1] Southern China was overpopulated, and suffered, like India, from famines. There was already a considerable number of Chinese in Malaya in the days of Sir Stamford Raffles, who tried to regulate the coolie traffic in 1823, and it continued throughout the century. In 1874, when the British started the develop-

[1] On the whole subject, Persia Campbell, *Chinese Coolie Emigration within British Empire.*

ment of the peninsula, Chinese emigration became the subject of an inquiry, and in 1876 it was brought out that although the bulk of the Chinese arrived as free emigrants, the rest came on a "credit ticket" system, by which recruiters in China advanced the money for the passage, and the coolies, after being allotted to an employer on arrival, had to work off the expenses of their tickets and those of the broker who recruited them and disposed of their services. This system was put an end to between 1914 and 1916, as it had given rise to many abuses. The value of the Chinese immigration may be seen from the following account by Sir F. Swettenham :—

"It was the Chinese who began the work (tin-mining)—the taxes on which provide the bulk of the revenue—who have continued it ever since and whose efforts have succeeded in producing more than half the world's tin supply. Their energy and enterprise have made the Malay States what they are to-day, and it would be impossible to overstate the obligation which the Malay Government and people are under to these hard-working, capable, and law-abiding aliens. . . . In all the early days it was Chinese energy and industry which supplied the funds to begin the construction of roads and other public works and to pay for all the other costs of administration. Then they were and still they are the pioneers of mining. They have driven their way into remote jungles, cleared the forest, run all risks, and often made great gains. They have also paid the penalty imposed by an often deadly climate. But the Chinese were not only miners, they were charcoal burners in the days when they had to do their own smelting ; they were wood-cutters, carpenters, and brick-makers ; as contractors they constructed nearly all the Government buildings, most of the roads and bridges, railways and waterworks. They brought all the capital into the country when Europeans feared to take the risk ; they were the traders and shop-keepers, and it was their steamers which first opened regular communication between the ports of the colony and the ports of the Malay States. They introduced tens of thousands of their countrymen when the one great need was labour to develop the hidden riches of an almost unknown and jungle-covered country, and it is their work, the taxation of the luxuries they consume and of the pleasures they enjoy, which has provided something like nine-tenths of the revenue. . . . The part played by the

Malay has already been told: it was mainly negative."[1] In another passage[2] Sir Frank Swettenham says: "But without the British officers to secure order and justice the Chinese would never have entered the country in tens of thousands; without British control of the revenues there never would have been any money to spend on the construction of roads and railways and all other works of development." Much has also been due to European skill, capital, and supervision. European miners introduced hydraulic sluicing and other scientific methods of dealing with the tin deposits, and they extended the use of machinery. It was European planters who introduced the rubber plantations, many of which are now owned by Chinese. Where Europeans did not develop great mineral and industrial undertakings, as in British Guiana, the Chinese did not settle but left the country.

Chinese were also recruited for the British West Indies, especially for British Guiana after 1859. Here they were transferred under an indenture system, contracting to work for a term of years, generally five. Curiously enough, while the Chinese have made such an enormous impression on the history of Malaya, their influence on British Guiana has been almost negligible. 14,002 Chinese were introduced into the colony between 1853 and 1879 and 1,718 after that date, but in 1911 there were only 2,622 left. The others had re-emigrated. The reason given was that the number of males adjusted themselves to the number of females, i.e. there were 1,481 males and 1,141 females.[3] Possibly the reason is to be sought in the fact that the economic development of British Guiana was not sufficiently advanced for the Chinese to show their special talents; there was no great mining enterprise like tin, no great trading openings or industrial occupations like salmon canning or railway building, and on plantations the Indian is preferred as being a more docile labourer.

Chinese were also introduced successfully in 1903 into South Africa to restart the gold mining after the Boer War, though they were not allowed to settle permanently and were repatriated in 1907. Better accommodation had to be provided for them than for the Kaffirs, and they

[1] *British Malaya*, Swettenham, p. 233.
[2] Ib., p. 301.
[3] Clementi, *The Chinese in British Guiana.*

raised the whole standard of the treatment of native labourers on the Rand.

In British Columbia the Chinese have been a big economic factor for the last sixty years. In 1858 gold was discovered, population flocked in from California, and the Pacific province became a Crown Colony. As it was impossible to get Europeans as labourers in so remote a spot, Chinese coolies were imported for ordinary field and domestic work. When salmon canning developed after 1878 there was an increased attraction to the Chinese who manned the factories. Then the Canadian Pacific Railway was projected, and in 1882 some 5,000 to 6,000 coolies were shipped to Victoria to make the British Columbia end of the line. After this the numbers of Chinese rapidly increased. They have successively been attracted to domestic service, laundry work, market gardening, the canning of fruit, vegetables, and salmon and the industries connected with the manufacture of wood. Large numbers of them became coal-miners and shop-keepers.[1] A great anti-Chinese agitation developed because it was thought that the Orientals lowered wages and had a different standard of living from Europeans. The Asiatic immigrants had come to own a considerable amount of land, and there seemed to be a fear that British Columbia might become an Oriental type of colony. 26,918 acres in British Columbia were said to be owned or leased by 1,080 Asiatics.[2] Poll taxes of increasing severity were imposed to limit their numbers. In 1885 it was $50, in 1901 $100, and in 1904 $500. The head tax has amounted to the large sum of $21,011,793 between 1886 and 1921. From 1901 to 1922 no less than 59,910 Chinese emigrated to Canada.[3]

The "Asiatic menace" was held to be increased by the large number of Japanese who began to come in after 1900. They, too, became active in lumbering, canning, mining, fishing, and agriculture. 20,889 entered Canada between 1901 and 1922.[4] Restrictions were imposed by Treaty in 1908 on the immigration of Japanese into Canada and the annual number was limited to 400 immigrants. In 1913 an Order in Council, repeated in 1919, prohibited

[1] *Round Table*, March, 1923, "Asiatic Immigration into Canada."
[2] *Annals of the American Academy*, May, 1923, p. 51. Professor Boggs, "Oriental Immigration."
[3] *Canadian Year Book*, 1921, pp. 130–1.
[4] Ib., p. 131.

the entry into Canada through British Columbian ports of skilled and unskilled labourers, a rule which is supposed to be rigidly applied against Asiatics although some 1,700 Chinese were admitted in 1921–2. A further limitation was imposed in 1922 when any immigrant of Asiatic race was required to possess $250 in his own right on entering. This does not apply, however, where there is a special treaty. The Indian colony only amounted to 1,100 in 1922.[1] The settlers, able to get Chinese and Japanese, have not troubled to organize an import of Indian labourers. There was no direct steamer communication between British Columbia and India prior to 1914, and that prevented an independent Indian immigration as the law requires that the immigrant shall come on a direct voyage. Much political capital has, however, been made in India out of the superior position of the Japanese in a British colony to that enjoyed by British Indians.

In Australia the feeling aroused by Asiatic immigration reached such a point that it not merely gave rise to exclusion laws of various kinds ranging from the limitations on ship-owners to impossible educational tests, but actually caused the federation of the six Australian states into a Commonwealth, so that Australia should be a sufficiently large unit to resist the possible pressure of Asiatic governments.[2]

It is interesting to see how the vacuum created by the abolition of slavery and the demand for labour to supplement native peoples led to the migration of Asiatics so that the King of England rules over a new and miniature Indian Empire in the West Indies and a little Chinese Empire in Malaya.

The ease of migration in the days of railways and steamships has led to the clash of the two parts of the British Empire and to a divergence of interest between the self-governing dominions and Britain's two allies in the Pacific, Japan, and China.

[1] *Round Table*, op. cit., p. 403.
[2] See vol. ii.

Agricultural Development, Education, and Health

SYNOPSIS

Tropical Agriculture and its Problems

(*a*) Land tenures.

The application of English ideas to India, the growing respect for native forms of tenure. The reserves. The waste lands and their alienation or lease.

(*b*) Methods of agriculture.

(1) The planter and the peasant.

Peasant agriculture—Self sufficiency, the collection of forest produce, shifting cultivation, the mixed garden, the production of an annual crop, the growth of exchange cultures.

The production of exchange staples on a large scale.

(*a*) by making natives cultivate certain staple products as tribute or rent;

(*b*) by cultivation on large plantations with wage paid or slave labour. The abolition of slavery in the West turned men's attention to the East as a planting region.

Advantages of the plantation system—the opening up of the country, scientific principles of agriculture, efficiency of production, fall in price, benefit to the European consumer, ease of marketing. Disadvantages—the importation of labour, the possibility of a collapse of the market for the staple by production elsewhere or by disease attacking plants, ousting of the wild product by plantations, e.g. rubber, coco-nuts. Control of prices. Peasant cultivation more stable but inefficient. Involves Government assistance, education in school gardens, co-operation, marketing, seed selection and distribution, demonstration farms. The guarantee of price.

(*c*) Communal plantations.

(*d*) The creation of peasant holdings in the West Indies.

(*e*) The problem of subdivision of land in countries of dense population. The necessity for intensive cultivation.

(2) Scientific Agriculture.

(*a*) Distribution of new plants, e.g. quinine, rubber.

(*b*) Breeding new strains of plants to withstand disease or to produce certain qualities. Sugar, wheat, rice.

(*c*) The fighting of pests.

(*d*) The plant doctors; cocoa canker, quinine canker.

(*e*) Agricultural chemists and engineers. Central factories.

Education and Finance.

(*a*) Technical education has hinged on factories and railway development. Literary education has made slow progress. Reasons: Cost; Parents' objection to losing the services of boys in agriculture; the excess of clerks over posts in India. Distance to schools; Language and caste difficulties.

(*b*) Direct *v.* indirect taxation.

The land tax; Export duties; Excise duties on liquor, opium, salt. Licences.

(*c*) The introduction of a metallic currency.

Tropical Medicine and Sanitation.

(*a*) Effect of malaria in India, Africa, and Malaya.

Sir Ronald Ross' discovery, 1897.

The Schools of Tropical Medicine in London and Liverpool, 1899.

(*b*) Sleeping sickness and the tsetse fly.

(*c*) The hook worm.

(*d*) Sanitation.

Tropical Agriculture and its Problems

Agriculture in the Tropics is fundamental since it is by agriculture that the native lives. A colony may flourish for a time on mineral production, like the Federated Malay States, but sooner or later its permanent prosperity must be based on agriculture, i.e. not on robbing the soil but on cultivating it. It is to obtain agricultural products or minerals that Europeans have impinged upon the Tropics, and it is by exchanging these products for manufactured goods that Europeans find their markets. On the development of agriculture the improvement in the position of the peasant ultimately rests.

Two main types of agricultural exploitation are to be found throughout the Tropics—the large capitalist plantation and the small peasant holding. Thus the European problem of the large and the small farm is encountered again in the Tropics, and the same problem of " peasant rescue " and raising the standard of the small cultivator is common to both East and West.

The chief problems that confront the administrator in the Tropics are bound up with Agriculture. It is an agricultural and technical training that the free peasant needs and not a literary one. If he can be trained to grow enough food for the family requirements, and to produce a surplus for exchange, he has been led a long way towards a more secure and civilized life. Buying, selling, and more intelligent cultivation sharpen the faculties. If he has a surplus he has a partial insurance against famine because he can purchase food with the proceeds of the surplus in other years.

But the question of better agricultural methods which lies at the basis of all education in the Tropics involves many considerations. It is intimately bound up with water supply, irrigation, transport facilities, and taxation. It hinges on the questions of land tenures as well as on the introduction and adoption of more varied methods of cultivation. The native has not merely to be protected from the encroachments of the large plantation, but space has to be left for his expansion as his numbers increase so that lands even if unoccupied cannot lightly be granted away to concessionaires.

In every country, but especially in India, where there is a vast mass of ignorant and poverty-stricken peasant

cultivators, the task before the administrator has been to try and save them from the clutches of the moneylender and from rack-renting by landlords and from exploitation by Europeans.

The lands in the Tropics were regarded, as they were regarded in feudal times in Europe, as belonging to some paramount Chief or King, or to some abstraction representing the community, such as "the Stool" in West Africa. When England, as the conquering power, took the place of the Emperor, King or Chief, she became the ultimate landowner, and it has rested with her to determine the type of settlement of unoccupied lands and the manner of their development. In her are vested under one legal formula or another, all the waste or public lands to give away, lease, sell, or withhold. On her attitude towards peasant land tenures their livelihood and fortunes depend. She may turn them into freeholders as she did in Ireland and in certain parts of India. She may turn revenue collectors into landlords as she did in Bengal, or she may carefully continue the ownership by communities that she found in Nigeria and the Punjab. Nevertheless, there were great areas of vacant lands in all her tropical possessions. There have really been three problems to be solved. Firstly, the Government had to evolve a policy with regard to the vacant lands. Should they be disposed of in large quantities to great companies or should they be given away or sold in small areas to encourage peasant cultivation.[1] The overlordship of vacant lands also involved the preservation or replanting of forests and this often meant an interference with the pasture rights of native peoples. The disposal of vacant lands also raised the question of providing adequate reserves for African natives in places where the white man could settle. Even in cases where a chartered Company went ahead of the Government and acquired land from chiefs on its own account, the question arose as to the extent to which the Company's right to the vacant land should be acknowledged when the Government assumed control.[2] Then the further question of making desert lands available by irrigation came up as population increased

[1] How large some of the alienated areas were may be seen from the fact that the British Central African Company owned 350,000 acres, the African Lakes Company and the Blantyre and East African Company 150,000 acres each. In East Africa the East African Syndicate obtained 320,000 acres. Lugard, p. 329, n. 330*n*.

[2] Cf. Southern Rhodesia.

and in this case the Government itself would determine the form of settlement when placing out its colonists as in the Canal colonies of the Punjab.[1]

A second question arose with regard to occupied areas. To what extent would the Government permit communal ownership of land and to what extent would it encourage the change to individual cultivation and freehold tenure? Being faced by an already existing tenure in the nature of individual ownership, to what extent would Britain allow the peasants to alienate their holding to a moneylender or capitalist. Must not ignorant peasants be protected from themselves? But if the British Government was prepared to protect the peasant owner, why not include the tenant also and protect him from his landlord? Thus the functions of the governing power with regard to land grew and extended.

Thirdly, having evolved some policy on the question of tenures, it then became part of the functions of the Government to try and improve the methods of cultivation, and this came to include provision for the spread of scientific knowledge, the provision of seed, the supervision of the products marketed, transport and credit facilities.

Thus on every side the functions of government with regard to land have involved an elaborate amount of paternalism and statesmanship, as account had to be taken not merely of the present but of the future. Forest Conservancy, for instance, necessitates thinking in terms of lifetimes and centuries.

At first England was influenced in all her dealings with oversea lands by the ideas prevalent in England itself at the beginning of the nineteenth century. At that time it was held that the large farm in which capital was invested was the best form of cultivation, and that individual enterprise should in all cases be encouraged. In England itself the desire to increase the yields had led to the break-up of communal ploughing and reaping and to enclosures. English administrators could not conceive of anything but ownership, whether that of small freeholders, or a landlord and tenant system. Therefore they dealt with the people they encountered in India and elsewhere as large or small freeholders liable only to pay the land revenue to the Government. The governing classes highly approved of granting large areas of land in freehold to individuals

[1] See p. 376.

or companies who would start plantations, just as they approved of the large farmer at home. No one could have foreseen the great growth of population in India or among the Bantus of South Africa, which as the century went on caused more and more of the vacant lands to be taken into cultivation. Therefore it never occurred to the early nineteenth century administrators either that there might be a possible exhaustion of the waste lands or that the State might reserve to itself the right to share in the growing value of the waste lands in future.

As British influence extended in India, it came into contact with something that was quite different from the individual ownership of land known in England, viz. the joint village. The authorities concerned looked in vain for a land owner who could be made responsible for the payment of the land revenue, but found instead a group of persons equally responsible. A minute by Holt Mackenzie in 1819 set out the matter at length, and no attempt was made to alter this form of land-holding, although the Zemindars, or tax collectors, had been turned into landlords and the peasants into tenants in Bengal in 1793, following the English model.

From 1819 English ideas of land tenure were not imposed upon India, but the native tenures were accepted once they were understood. Thus the mistake made in Ireland in the sixteenth century was avoided. The great example of an attempt made to understand native tenures and avoid undue interference with them occurred in West Africa where commissions were held in 1908 and 1912 for the Gold Coast and for Nigeria respectively to investigate the meaning and scope of the existing land tenures and advise on the course to be pursued.

Another attempt to settle the land question so as to preserve native rights came up quite early in the nineteenth century with regard to the reserves in South Africa. In West Africa the white man cannot permanently settle and rear a family, and so the struggle of the two races for land is avoided there, but in the Union of South Africa, Rhodesia, and the highlands of Kenya the white race can found homes, and there is a clash of interests, both peoples wanting the best watered areas in healthy districts and both resenting the encroachment of the other.

England was very much concerned about the African peoples in the 'thirties, partly owing to the interest aroused

by the missionaries and partly owing to the anxiety to suppress slavery and prevent its recrudescence. Thus the British Government (not the Colonial Government) deliminated the areas for reserves in Cape Colony and Natal on what was at the time considered to be a liberal allowance for a pastoral people like the Kaffirs. No one foresaw the present pressure on the reserves of the Union, and the tendency to overflow them and settle on white man's land. Even when a Company ruled in Rhodesia, the Imperial Government insisted as early as 1894 that sufficient land for their requirements should be assigned to the Matabele. Rebellions interfered with the accomplishment of this, and the matter was taken up again in 1898 and 1917, when it was reported that the natives living on reserves occupied 50–55 acres per head and if the whole of the native population were settled on the reserves it would still amount to 28 acres per head.[1] Even though this seems ample, the natives have been buying land outside.

A further question arose during the century as to whether permanent alienation of land to planters, white settlers, or companies was desirable, and the general tendency has been to lease land only, and that with a periodical revision of rents; the trend is also to prevent the absorption of enormous quantities of land in a few hands.[2] This has involved supervision of the way in which the native alienates his land, and he now in most cases has to sell land to companies or Europeans through the Government, which may, or may not, permit the transfer. In India the right of alienation by one native to another is also being restricted.

Whatever the origin of the tenures may have been, the "inevitable tendency has been towards the recognition of individual proprietary rights in land *pari passu* with social evolution." [3]

[1] *Cd.* 8674, 1917, p. 17.

[2] "It is clear looking to the experience of other Colonies that steps must be taken to prevent the accumulation of enormous quantities of land in the hands of individuals through the operation of free transfer and also that the conditions of tenure may be such that the Government may be able from time to time to obtain its share of the unearned increment in the value of land—that is, the portion of its value which is due to the growth around it of an organized economic and political system." "Despatch by the Secretary of State for the Colonies to the Governor of East Africa, 1908," quoted *Cd.* 4117, 1908.

[3] Lugard, op. cit., p. 281, n. 1.

In India, where the conditions vary enormously, the tenures are typically of an individual proprietary nature; the cultivator is, however, a peasant. There are the large estates of the Zemindars or talukdars who sublet to small tenants, and it has been the policy of the British Government to render the tenure of these secure and to safeguard them against eviction and unfair rents. In the ryotwari districts the peasants are owners and do not pay rent. They remit part of the yield of the land as a revenue payment to the Government, as do the Zemindars or big landowners, according to immemorial custom. It is not called a tax—it is the Government right to a share. Sometimes this is periodically re-assessed, in other cases it is a permanent fixed amount. Out of the waste and unoccupied highlands of Assam and other parts of India have been carved large plantations held in freehold by English planters and companies to grow tea, coffee, sugar, and quinine. In the occupied districts of Bengal where indigo "planters" took up land they occupied the position of the Zemindar and sublet to peasants on the condition that they grew indigo. In the wastes of the Punjab, now turned into fertile regions by irrigation, the plan of State colonization with peasants has been pursued.

The subdivision of the holding at death among the males of the family is part of both Hindu and Mohammedan law. This produces in India the uneconomic holding and scattered scraps of land which make it so difficult to introduce improved methods. The land is sometimes held not by individuals but by a joint village which divides the proceeds of common ownership. There was at one time a large amount of common land in connexion with most villages for grazing or wood cutting, but the tendency is for this to become limited under the pressure of population, while vacant lands, present in considerable quantities at the beginning of the nineteenth century, scarcely existed in India in the twentieth except as deserts, which are being more and more brought into cultivation by irrigation, or as forest areas controlled to conserve the rainfall and modify the climate.

In Ceylon the tenure is freehold, and at death the lands of the natives, as in India, are divided equally between the males of the family. This has in both regions much the same effect as in France, in that it renders the population immobile and a man possessing even a tiny plot is unwilling to leave it and move elsewhere. Here too his holding tends

to become uneconomic after several subdivisions, and when the land is worked jointly to counteract this it is difficult to introduce new crops as all the owners must consent to the change, and unanimity is as difficult to obtain as it was in the case of voluntary enclosure in England or Germany. The Sinhalese were, however, settled on the plains and coast, and the inland mountainous district was forest and waste. It is out of these great unoccupied regions that the plantations of Ceylon have been carved, the planter or planting company buying the land outright from the Government. There has been hitherto no question of the great plantation encroaching on native reserves and limiting the forest rights or grazing grounds of the indigenous people.

In the Federated Malay States, where the population is sparse for the size of the country, the land is the property of the Government, which leases it for long periods, such as 999 years, but reserves the right to revise the quit rent every thirty years. If the land is not cultivated for three years, the Government resumes it. The advantage of this system is that the planter does not require so much capital for his initial outlay on land, and can devote it to planting instead, and the State gets the benefit of some of the increased value at the revision period.

In Northern Nigeria a committee was set up to advise on the best method of dealing with the land.[1] The result is that the whole of the land of the Northern Province is declared to belong to the natives, but it is controlled and administered by the Government. The land taken over by the British Government from the Royal Niger Company included the sole and absolute title to land a mile on either side of the Niger from the frontier of Southern Nigeria to Lokoja. Proprietary rights in land have never been recognized by native law,[2] and the British power provides for the maintenance of native customs in this respect. Building and agricultural leases are granted by the Government with conditions as to improvements and revision of rents. The whole idea was that land should not be permanently alienated to planters and mining

[1] "Report of Northern Nigerian Lands Committee," *Cd.* 5102, 1910.

[2] "Unless I am greatly mistaken the cardinal feature of native custom with regard to the tenure of land is that under no possible conditions can a private estate exist." "Northern Nigeria Lands Committee," Temple, p. x.

concessionaires, but that it should be possible to resume it for native occupation if the population increased in Nigeria in the future as it has done in India during the past century. England did not attempt to turn the native in Northern Nigeria into a freeholder,[1] as she did in the early days in India.

In the Southern Provinces native lands are not at the disposal and under the control of the Governor in the same way, but land may not be leased to a non-native except with the consent of the Governor.

In Uganda the cultivated land in 1921 was 1,931,077 acres and the uncultivated 36,810,043 acres. Of this 9,620 square miles are freehold to the natives. Leases are granted by the Crown up to 99 years in portions not exceeding 1,000 acres, with the usual proviso as to cultivation and revisions of rents in the thirty-fourth and sixty-seventh year. The natives were formerly permitted to sell to the Crown for alienation to non-natives with the consent of the Government, and 55,551 acres were so transferred. This is now prohibited, and lands may only be leased, not sold. Europeans in 1920 held 188 square miles, of which 109 were freehold.[2]

In British East Africa certain lands were allocated as Native Reserves, which are held according to tribal custom. The land is here divided amongst the tribes and held in common. Outside the reserves the land is Crown land, and the earlier grants from these lands were in freehold, but leasehold is now the rule. Prior to 1915 the term for leases was 99 years, it was then extended to 999 years, with the system of revised rental periods. Town lands are, however, leased for 99 years only. The land tenures are complicated in the coastal strip by the fact that the land held originally under the Zanzibar Sultanate was subject to Mohammedan law.[3]

[1] "The first effect of the adoption of the principles (1) that the whole of the land, whether occupied or unoccupied, is subject to the control of the Government, (2) that that control is to be exercised as far as possible in accordance with native customs, seems to be to exclude the English conception of private ownership of land, or of any fixity of annual payment on account of the occupation of land." "It seems to be clearly proved that by the customs prevailing throughout Northern Nigeria, grants of user and enjoyment of land are merely revocable licenses to cultivate the land, though in fact such licences are subject to variable payments and are in practice not revoked except for good cause." *Cd.* 5102, pp. ix (§ 20) and x.

[2] *Annual Report*, 1920. This did not include mission lands.

[3] *Admiralty Handbook, Kenya Colony*, p. 477.

In the West Indies the land is alienated in freehold, but there are still large areas of unoccupied and unsettled Crown lands in Honduras and British Guiana.

As some of the sugar estates became derelict in the period of depression, interesting experiments were made by the island Governments in St. Vincent, Grenada, St. Lucia, and Carriacou, with regard to creating a class of small proprietors in these derelict estates. The land was sold to the negro peasant cultivator, but he paid in instalments extending over 20 years. Thus there is in the West Indies, as in Australia, the attempt at " closer settlement ".[1]

The methods of agriculture throughout the Tropics are represented by the relatively advanced capitalistic cultivation of the planter on the one hand and the primitive agriculture of the peasant on the other, and these two are virtually centuries apart in their outlook and practice.[2]

The most primitive form of agricultural subsistence is encountered in the dependence on self-sown forest produce, such as nuts or roots.[3]

Later this may be supplemented by a type of cultivation known by different names in different countries, but the form is general, and consists of burning the forest and taking a crop and then letting the ground lapse back into scrub until, in twenty to fifty years, it is re-burnt and another crop taken. It is, in fact, a system of shifting cultivation, and can only exist where there is a large amount of vacant land.

" Among the jungle tribes the practice was common of burning the forests to secure a few years' temporary cultivation . . . On a hot day in April I have seen the woods blazing near the top of Amarkantah to make a clearance for cultivation, while over the forest below, away to the East, blue smoke wreaths showed that the same process was going on in all directions as far as the eye could reach. In Chota Nagpur, still further east, the destruction of the jungle has been so serious that the Government of Bengal appointed a Commttee to suggest remedial measures, and attention has been drawn to the increasing violence and frequency of floods in Orissa owing to the destruction of forest in the

[1] *West India Bulletin*, 1914, " Peasant Agriculture in the West Indies."
[2] On the whole subject, J. C. Willis, *Agriculture in the Tropics*.
[3] Where locusts ravage the country a dependence on roots is a necessity, and the natives acquire the habit of seeking their food underground.

catchment area of the rivers."[1] The destruction of the forests in India means the absence of fuel and the substitution of dung-cakes, with the result that the soil is defrauded of manure. In the Kikuyu country in the last fifty years or so the natives have destroyed over 1,000 square miles of forest by burning. Here, too, the humus is often removed in the season of the rains and the country ruined for many years to come.[2]

A less primitive form of agriculture tends to emerge as time goes on, which has been styled the "mixed garden",[3] i.e. a rough patch has some trees of various kinds planted and perhaps a portion is cleared to supply grazing for cattle, and this, although primitive, means the beginnings of permanent cultivation. When the pressure of population is acutely felt there is no longer the possibility of burning large areas and changing the ground, and an annual crop must be grown. The surplus of this food-crop, such as rice or of a rotation crop like oil-seeds, is often sold. The most developed form occurs when a commercial crop is produced, like fruit, coconuts, jute, or cotton, and is exchanged for food, clothing, and utensils. This means specialization and exchange. The typical production of the Tropics is, however, one where the peasant "grows what he wants and consumes what he grows". Throughout immemorial ages he has had little or no surplus, and could not exchange it if he had. Owing to the absence of roads, dealers could not seek him out except at accessible spots along the coast or on rivers, so that the native of the interior was for the most part left alone to continue his cultivation by backward and primitive methods. If his crops failed, there was no possibility of relief; transport was undeveloped, surpluses that could be transferred even by a river were practically non-existent in a scarcity year, and, after all, what had he to offer in exchange. So he

[1] Sir J. Miller, "Central Provinces of India": *J.R.S. Arts*, May, 1912, pp. 618–19. It also exists to-day in Honduras, see *Report* by Dunlop on "The Economic and Natural Features of British Honduras". "To understand the economic situation of British Honduras the reader must know that most of the accessible and fertile lands are in the hands of relatively few private owners. Most of these lands are merely exploited for forest products, chiefly mahogany and chicle, while agriculture, except for the cultivation of coco-nuts and sugar cane, is of a shifting character and extremely primitive," pp. 1–2.

[2] *Journal of the African Society*, "Native Problems in East Africa," April, 1923, p. 194.

[3] Willis, op. cit.

simply died out in a famine, and whole districts became depopulated.[1]

Into this primitive, backward, unenterprising world of peasant agriculturists came the capitalist, bringing new cultures and initiating production on such a scale that it should provide large surpluses to feed or clothe the Western peoples. The Arabs began to organize the collection of spices, which from the fourteenth century were brought by the Red Sea and Persian Gulf to the fringe of the Mediterranean or the Black Sea, and were fetched from thence by the Venetians and Genoese and distributed throughout Western Europe. Here the diet was extremely monotonous, and consisted of a quantity of salt meat, as the cattle were killed off at Martinmas, when they were fat, because, till the eighteenth century, there was no winter fodder which enabled them to be kept over the winter. The result was that these pungent flavourings were a physical necessity, and the trade was extremely lucrative. Then the Portuguese, a great crusading nation, being anxious to cut at the source of infidel wealth, came to the East in 1498 in search of " Christians and spices ". The Dutch had assisted in distributing the spices brought back to Lisbon, but after 1580, when Lisbon fell to Spain and the Spaniards cut off the trade of the heretics who had rebelled against them, the people of Holland went out to the East themselves in 1595. They settled in Ceylon, and in the spice islands of the Eastern Archipelago, where they carefully organized and controlled the production of cinnamon, cloves, nutmegs, mace, and pepper. In the eighteenth century they introduced coffee. The natives were made to grow and bring in a tribute of these commodities, and the proceeds of spice and coffee cultivation or collection of forest-grown spices became a monopoly of the Dutch East India Company, and after its decline of the Dutch Government. The British Government inherited the Dutch monopoly of cinnamon when it took over Ceylon. But even then the interiors seem to have been but little affected. It was the coastal and riverine regions that began to have an organized surplus under the stimulus of the European demand. Planting in the East varied from that in the West in that in many parts a native population was available. The Dutch in this case instituted a forced and supervised levy of the product or insisted on a certain crop such as coffee being grown. This was the case in

[1] In 1770 one-third of the population of Bengal are said to have died.

Java.[1] In other islands, such as Amboyna and Banda, where the natives either could not or would not grow what was required, the Dutch cleared them out and an elaborate system of planting by slave labour was instituted, which was obtained from Southern China and India. The Dutch families who supervised the planting did so as agents of the Dutch East India Company. The notion of a man growing a specialized product with wage-paid labour and selling where and when he liked was foreign to the East until the nineteenth century. British plantations of this nature did not begin till after 1833, as Englishmen were not allowed by the East India Company to acquire land and settle in those parts of India under its control. Indigo had, however, been grown under the supervision of the company in the eighteenth century, but this again was chiefly a system of making advances to the natives to grow indigo and bring the crop to the factory. Indigo planting in the nineteenth century still retained this characteristic and actual " planting " by a planter was the exception.

When the East India Company ceased in 1833 to have any connexion with commerce its restrictions on settlement lapsed, and British settlers had a chance to plant and sell Indian produce on their own account. In the same way the abolition of the Dutch monopoly in Ceylon had, at an earlier date, cleared the way for individual planters in that island. The openings in Ceylon and India coincided with the shattering blow to the British planting industry in the West, when slavery was abolished, and men's attention was then turned from West to East.

British colonization even in the Tropics had been an expansion of the English landed interest, and from the very earliest beginnings in the sixteenth century colonization and plantation were synonymous terms.[2] Tobacco was started on large estates in Virginia, and sugar in the West Indies, two centuries before the British transplanted this system to the East, where they had previously been traders

[1] In the Sunda district of Java under Dutch rule each family had to take 1,000 coffee plants, in the Eastern districts 500. When the coffee was grown it was delivered at collecting depôts by the peasants. The coffee was examined by European officers on arrival and they were supposed to superintend the method of cultivation. Sir Stamford Raffles, *History of Java*, i, p. 138. When the British held Java they began to abolish this system, but it was resumed when they gave back the island, and the system of forced cultures was extended by Van den Bosch between 1830 and 1870.

[2] See Bacon's essay " On Plantations ".

and not planters. Coffee plantations, as we have seen, were started in the 'thirties in Ceylon.

The plantation system implied the possession of capital. The planter had to wait till his cane or tobacco was grown, he had to wait till it was sold, perhaps in Europe, and the money remitted for the crop, he depended on the sale of his product for buying all he required in the way of food, clothing, plant, and labour. The keynote of the plantation was specialized culture for sale, reliance on purchased or hired workers, and a considerable command of capital, in contradistinction to peasant agriculture, which is characterized by self-sufficiency, family cultivation, the absence of money or capital, and a low standard of wants.

Primitive tropical agriculture had thus engrafted on to it a highly developed system working for a market, and producing by far more efficient methods the great tropical staples for world consumption. Thus two divergent systems continued to exist side by side, the one imported from outside and constantly changing, the other fixed by custom and needing transport, education, seed, knowledge, advice, supervision and facilities for marketing before any impression could be made on the immemorial conservatism of peasants' methods. The break-up of the isolation and self-sufficiency of peasant agriculture and its increasing specialization, which began in India after the coming of the railways [1] and on the Gold Coast in the 'nineties, is one of the most striking of tropical economic developments of our own time. On the other hand, peasant agriculture in the West Indies, being a development of the plantation system, has consistently grown tropical produce for a market and the peasant has bought his food, which is mainly imported, from the proceeds of the sale of his topical culture.

The advantages and disadvantages of the two systems of peasant and planter cultivation have given rise to much discussion.

In many respects the large plantation is almost essential if a colony is to develop and pay its way. "Two or three large planting enterprises will do more to open up and enrich the country than thousands of villagers can do." [2] The planter or planting company has in the past brought money into the country and from his exports or other resources

[1] Indian Industrial Commission. *Cmd.* 51, 1919, p. 8.
[2] Willis, op. cit., p. 203.

a large proportion of the taxes have been obtained from which sanitation, education, and hospitals have been provided, which also benefited the native. The large planter must have communications; he has caused roads to be built and railways have followed, and from this development of communication the peasant has also gained.

The planter farms on more scientific principles, and is generally more efficient than the peasant. His whole object is to produce as great a quantity of the product as possible, and the growing wants of the world for tropical staples have been satisfied by this large scale production under free conditions.

"Even in the industry which of all others should be best understood and practised by the races of tropical mankind, that of rice growing, the white man is able to produce a larger crop at less cost. While his labour is ten times as costly he produces, man for man, about 20–100 times the crop. The Ceylon tea planters by good methods and by the use of machinery have been able almost completely to undersell on the markets the produce of China made by the most cheap and industrious labour in the world."[1] The fall in the price of tea during the nineteenth century has been the effect of the widespread planting of tea, combined with efficient and machine methods of drying the leaf.

The planter is, however, dependent on obtaining labour. Local labour is rarely available in sufficient quantities, and in any case it is neither regular nor eager to work for wages. There is, then, either a demand for compulsion to be brought to bear on the native or the import of foreign labour is organized, for which also a food supply such as rice has to be provided. The introduction of foreign peoples such as Tamils, Javanese, or Chinese may, or may not, be a good thing for the colony. The coolies, if encouraged to take up land, as in Trinidad and British Guiana, create another alien element which differs in religion and race from the original inhabitants. Intermarriages take place in Malaya between Javanese and Malays, and no one can yet foresee the result of the racial mixture. It may improve or deteriorate the native stock. In some ways the new race may prove a stimulus to the old, and create that pressure of population which alone seems to ensure efficiency in a tropical

[1] Willis, *Report on the Agriculture of the Federated Malay States*, p. 31.

agricultural peasant population. If some disaster overtakes the planting industry, then the coolies are thrown out of work, as happened in the West Indies, and a fresh problem is created.

All kinds of subsidiary trades flourish in the wake of a great planting industry, and after a time natives begin to take up the industry and it ceases to be an alien excrescence. In any case, the imported coolies spend large sums of money in the country. The planter is superior to the peasant in his method of treating the staple after it is harvested. If it be cocoa he has ways of fermenting which are scientific, and better cocoa is the result. Plantation cotton is ginned and baled by machinery, and this saves transport. Sugar or coconuts are more efficiently treated on the plantation. Under native methods no less than 40 per cent of the palm oil goes to waste at present, "that means that last year 80,000 tons of oil went to waste."[1] Better grading for quality is also a result of the plantation production. There is, however, nothing to prevent a ginnery or crushing factory or tea drying house being erected to which the peasants shall bring their product. The erection of ginneries became the custom in India during the American Civil War and the consequent cotton famine. Europeans owned the presses at first, but they have now passed into Indian hands.[2] Over 100 ginneries exist in Uganda, and a Government inspector grades the product.[3] The plantation itself offers a good market to the small cultivator who is growing the plantation product. In Ceylon the tea gardens, only comprising 1–40 acres, sold their leaf to the nearest big factory for cash, and it was then turned into good, finished material. On the other hand, in India there was a constant friction between the indigo planters and the small cultivators as to the price the latter received when they brought their raw material to the planter. With his better education, the planter can take advantage of the scientific experiments of the agricultural departments, and having learnt by bitter experience, he is willing to seek expert advice on the extermination of fungoid and insect pests. The peasant regards them as an inevitable visitation of God, and does nothing.

[1] Sir H. Clifford on "Nigeria and the Gold Coast", reported *West Africa*, 10th May, 1924, p. 440.
[2] *Indian Industrial Commission*, p. 23.
[3] *Report* 1921.

The great disadvantage of a colony resting on the planting interest is the element of impermanence involved. The planter is there to make money and get out. He does not intend to make his home in the Tropics; to him a tropical colony is exile. If the plantation does not pay it ceases to exist and there has been in the past the experience of such over-production in the great staples of sugar and quinine and recently in rubber that on several occasions plantation colonies have been in serious danger of collapse. Not merely over-production, but such diseases as those which attacked the coffee or cocoa plants in Ceylon have threatened to wipe out the industries altogether. A colony relying on these trading cultures is fundamentally insecure, but the adaptability of the planter or the planting company and their ability to secure more capital and start new cultures has been striking, and has minimized the risk in the past. But at times the very foundations of the tropical colonies have been threatened by these failures of the staple, and an economic collapse of the plantations would mean that the sources of taxation failed, the labour supply and especially the imported labourers would become a problem, the transport system would also collapse since railways would have nothing to carry and roads would revert to jungle. A colony based on native peasant cultivation is far less artificial and is fundamentally sounder, although the development is less rapid. It is claimed that the big plantation has been a useful object lesson to the native grower. But the planter has not been particularly anxious to have peasants in his immediate vicinity, because being an object lesson so often resulted in mere depredation. Under the cover of a tree or two of his own, the enterprising native has systematically robbed the plantation and disposed of its produce for his own benefit. "Prædial larceny" is still a common feature all through the Tropics.

The planting industry is so efficient that its cultures have tended in the past to oust the original wild product, although that costs nothing to grow. Plantations can furnish large quantities with great regularity, and can grade and treat their products scientifically. They can also prevent cross fertilization of the plants. In all these respects they score over the uncertain supplies and varying qualities furnished by forest collectors. Plantation rubber has almost eclipsed the collection of wild rubber, and the cultivation of quinine has ousted the collection of the bark from the wild chincona

tree. It would seem as if plantations of oil palm might in time oust the wild forest tree.[1] Meanwhile the agricultural departments of West Africa are trying to produce a fruit with a softer kernel and a rind with a larger oil content. Coco-nuts, the most widely cultivated plant in the Tropics, "the consols of the East," are also being increasingly grown on very large plantations under European and in some cases under native management.[2] Thus the wild forest products of Brazil, West Africa, and the Congo were adversely affected by the culture of rubber and quinine in other regions of the world over which they had no control.

Chemistry also tends to find substitutes for plantation produce. The indigo planter was ruined by the synthetic dye of Germany, and the possibility of synthetic rubber on a commercial scale is the nightmare of rubber producers.

It takes three years before tea will yield a return and five or six years for rubber, and therefore considerable capital is necessary to develop plantations. The bulk of them are in the hands of joint stock companies run by European managers. As the industry is so highly capitalistic and so well organized it can accomplish its marketing with ease. Planters' associations of various kinds can also bring considerable pressure to bear on Governments. The industry can even work together and agree to restrict production. The quinine producers fix the price by marketing through a central selling agency. The planting interest is so important that they can often rely on Government assistance. The rubber producers in 1922 were acting with the Government when arranging their restriction on output. The tea planters have been able to restrict production by agreement as to close-picking. Recently in the West Indies the Government has made advances to the sugar planters and has marketed the crop to tide over the depression.[3] The planting interests can also agree to levy a tax or cess on the industry to develop new markets. The Assam tea

[1] In Sumatra there are 60,000 acres under oil palms and the planters are said to obtain a much larger yield of oil of better quality than West Africa. It is claimed that in ten years time they will produce as much oil as all West Africa at present.

[2] In Ceylon some of the Sinhalese have large plantations of coco-nuts.

[3] *D.O.T. Report*, 1923. The Government of a colony that encourages the plantation system should aim at diversifying the cultures and should not grant land say for a tea plantation next to another tea plantation. This would diminish the risk of disease spreading and overwhelming a whole area and it would probably obviate the difficulty of all planters requiring labour for one crop at the same time.

producers do this to push the sale of tea in France and the United States. The rubber producers also subsidize the search for new uses for rubber. On the other hand it is possible for the users to levy a cess on themselves to help peasant growers. Both the Lancashire and the Indian cotton spinners do this, the former to develop Empire cotton growing, the later to improve the Indian staples.

The effect of the plantation system, hardly a century old in the East Indies and hardly half a century old in East and Central Africa, has been little short of revolutionary. It has led to the penetration and exploitation of interiors and the utilization of waste lands as in Nyasaland, Ceylon, the Federated Malay States, and Assam, it has brought in capital and developed communications and has been one of the great instruments making for the scientific development of tropical agriculture. The experimental stations were developed primarily to help the planter, but their purview has extended both in the West and East Indies to include the peasant cultivator.

The following account of the plantation system in German East Africa was given by General Smuts in a lecture to the Royal Geographical Society in 1918 :—

" It is clear from their practice in East Africa that the Germans had decided to develop the country not as an ordinary colony, but as a tropical possession for the cultivation of tropical raw materials. They systematically discouraged white settlement ; the white colonists with their small farms gradually building up a European system on a small scale, who are so marked a feature of British colonies, were conspicuously absent from German East Africa. Instead, tracts of country were granted to companies, syndicates, or individuals with large capital on condition that plantations of tropical products were cultivated. Before the war much capital had been sunk in the country in this way, and everywhere one came across very extensive sisal, coffee, rubber, cotton and cocoa plantations. The planters were supplied with native labour under a Government system which compelled the natives to work for the planters for a certain very small wage during part of every year, and as native labour was thus very plentiful and cheap in this country, with its seven and a half millions of natives, the future for the capitalist syndicates seemed rosy enough. No wonder that under this corvée system East Africa and Cameroons were rapidly developing into very valuable

tropical assets, from which in time the German Empire would have derived much of the tropical raw material for its industries. The Germans realized better than most people that the value of tropical Africa lay not in any openings for white colonization, such as are being developed next door to their colonies in British East Africa, but in the plantation system where white capital and black labour collaborate to establish an entirely different order of things. Harsh as the German system undoubtedly is, I am not prepared to deny that it is perhaps the more scientific one, and that in the long run it is the more profitable form of exploiting the tremendous natural resources of the Tropics."

While this is the view of one great South African administrator, another authority who came from Malaya to the Gold Coast and became Governor of Nigeria, Sir Hugh Clifford, considered that " agricultural interests in tropical countries which are mainly or exclusively in the hands of the native peasantry, have firstly a firmer root than similar enterprises when owned and managed by Europeans, because they are natural growths and not artificial creations and are self-supporting as regards labour, while European plantations can only be maintained by some system of organized immigration or by some form of compulsory labour ; secondly, they are incomparably the cheapest instrument for the production of agricultural produce on a large scale that has yet been devised, and, thirdly, are capable of a rapidity of expansion and a progressive increase of output that beggar every record of the past and are altogether unparalleled in all the long history of European agricultural enterprise in the Tropics." [1]

Certainly the rapid development of cocoa producing in West Africa seems to bear out the possibility of the native being trained to do tropical production for a market, and it is interesting to notice that under the stimulus of cocoa production he has forsaken the communal methods. He prefers to keep his own cocoa plot, and is rapidly advancing towards individual cultivation and ownership. Cotton cultivation is almost entirely in the hands of natives in Uganda.

On the other hand, so great an authority as Dr. Willis considers that the principles of the East Indian native cultivator are " To do no work that can possibly be avoided,

[1] *Address to the Nigerian Council*, 1920.

never to do to-day what can be put off till to-morrow, and to do as their great-grandfather did, and because he did it." He continues : " It can be readily seen that to induce them to progress in agriculture or in anything else is a work of extraordinary difficulty." He gives a remarkable instance of the psychological obstacles to introducing new methods among peasants. " In the East of Java many of the natives grow sugar for the large factories in their neighbourhood and very often, so I was told, a man will rent half his land to the factory and work upon it himself, planting and cultivating the sugar cane according to the rules laid down for him. On the rest of the land he grows cane for sale and though he knows from his own experience that the native method is inferior to the European, yet he employs it." [1]

Thus if the native is to be induced to grow commercial products on a paying scale which will not merely satisfy his wants but raise his standard of comfort, the Government has to begin with the education of the child. The method of training in school gardens has been found to be most successful both in Ceylon and the West Indies, but the difficulty is to get the teachers.

" Already in Ceylon quite a number of useful plants have been introduced into village horticulture by means of school gardens, and all over the country one sees little gardens being started upon more modern lines, and on inquiry usually finds that they are the property of some family in which there is a boy attending a school with a school garden. Taken as a whole, there is perhaps no agency which has yet been tried that has made so great a difference in native horticultural practice as the school garden." [2]

In the West Indies, in order to bring " the mass of the people into sympathy with agriculture and trained to regard the successful treatment of crops as the basis on which to build not only their own welfare, but the general prosperity of the country," a prominent position was given to teaching the principles of elementary science and agriculture in the primary and secondary schools.[3] In British Guiana there were in 1911 over fifty schools with small gardens, and in Trinidad no less than 203 were examined in practical

[1] *Harvard Lectures on Agriculture in Tropics*, p. 12.
[2] Willis, *Lecture on Tropical Agriculture at Harvard University*, p. 28.
[3] Sir D. Morris in *West India Bulletin*, 1911.

agriculture. In this way the prejudice against anything that smacks of novelty may be gradually overcome.

All agricultural progress depends upon experiment. Some one must try and succeed with any new method, new crop or new tool before it can be taken up, and the willingness to experiment is best stimulated by education.

In addition to education, the small holder who is to be induced to grow better or more produce needs Government assistance at every turn to provide credit, seed, instruction and help in marketing.

If the small agriculturist is to take up any commercial crop he must be provided with capital, either to wait until the crop grows or to buy the new tool or manure. If he goes to the moneylender and is successful in obtaining a loan, he probably borrows at the rate of 50 per cent. He is therefore hampered at the outset. Some system of co-operative credit on the lines of Raiffeisen banks is absolutely necessary if the cultivator is to emancipate himself from the usurer. Such banks are being successfully promoted in the West Indies and in India.[1]

But if a new culture is to succeed, how is it to be marketed? Marketing implies, of course, transport facilities for the peasant to take the goods to the place of sale or for a dealer to visit the district and to collect the produce. Where the peasant relies entirely on a commercial crop and purchases his food, as in the West Indies, there is a considerable surplus which makes it worth while to organize the marketing. This can, however, only take place where transport is sufficiently developed to make exchange certain. Otherwise the peasant must grow food first of all. In many instances a market is provided by the neighbouring plantation which buys the sugar cane grown by the small cultivator in the West Indies or the tea leaves in Ceylon. In other cases where the peasant grows his own food, and only has a very small scrap of ground available for a commercial surplus, it is often scarcely worth while for the grower to take it to market or for several dealers to seek him out, and he becomes dependent upon one man, who fixes the price and a horde of intermediaries who take their toll.

In any case, when the surplus has become large enough to be sold to a dealer either at a local market or to a peripatetic collector, the peasant is apt to depend upon the dealer for

[1] Dunlop, "Agricultural Credit," *West India Bulletin*, 1914.

monetary advances, and is practically in his power as to price. It seems essential that some form of Government assistance in market organization should take place. In Egypt Lord Kitchener started the Government halaquas or cotton markets to which the raw cotton could be brought and where the price of cotton from all over the world was received by telegraph and published daily. In some cases these markets were great successes, in others complete failures. In isolated instances co-operative marketing has proved to be feasible in Ceylon and the endeavour of the Government agricultural departments is to promote this form as far as possible. The state of affairs in India was described as follows by the Indian Industrial Commission :—

" The export trade from country districts generally suffers from the existence of an undue number of middlemen, who intercept a large share of the profits. The reasons for this are various. In the first place it must be remembered that a great number of Indian cultivators are indebted to a class of traders who not only lend money, but lend, purchase, and sell grain and sell such articles as cloth, salt, and oil to small consumers. The position of a peasant farmer with grain, seeds, or cotton to sell, and at the same time heavily indebted to his only possible purchaser, effectually prevents him from obtaining a fair market price for his crop. Even where the farmer is not burdened by debt his business with the dealer is still very often on a *per contra* basis, his purchases and sales being alike reckoned in cash in the dealer's books at a rate which is not always known to the customer at the time. The farmer, owing partly to poverty and partly to the extreme subdivision of land, is very often a producer on so small a scale that it is practically impossible for him to take his crop to the larger markets, where he can sell at current market rates to the agents of the bigger firms . . . There are almost always one or more intermediaries between the purchaser who moves the grain to the point of consumption or export and the producer or other person who actually brings the crop into the market. The market rules and organization do not usually provide means for preventing or punishing fraudulent trade methods, while the multiplicity of the local weights and measures, and in many cases, it must be added, the natural desire of the seller not to be the only person defrauded, contribute still further to an undesirable state of affairs. Complaints are frequent, but all parties accept what appears to them the

inevitable. But where a better organization has been established the ryots thoroughly appreciate the benefit. A better market system, co-operative selling and education are the most promising remedies." [1]

In Uganda, where it has been deemed desirable to induce the natives to take up coffee, the year's crop was purchased by the Government. It is proposed to establish central pulping stations there to ensure the proper preparation of coffee for the market. In 1918 licensed buying posts were created for cotton and proper storage had to be provided or the license was not granted.[2] In Nigeria the cotton is inspected by Government examiners to prevent the export of mixed or inferior parcels.[3]

The necessity for the supervision of marketing conditions is also seen in the condition of things in Northern Nigeria, as described by Sir Frederick Lugard in his Report of 1920.[4]

"With the advent of the ground nut season Kano is flooded with an undesirable influx of aliens from the south, who set up their weighing machines on every avenue of approach and seize the produce from the peasant, forcing their own price upon him, and making exorbitant profits by resale to the merchants. The latter complain that the ground nuts are adulterated with sand, that cotton is mixed with stones and sand and is watered—bales being purposely left in the rain and bags thus rotted—though before the advent of these parasites the produce was clean. Yet the merchants in their eager rivalry with each other, lend weighing machines free of cost, supply empty bags and advance them large sums of money without security (for they are without capital) with which they occasionally abscond.

"It is said that the profit made by these middlemen often amounts to £1 per ton, and the result of this trade rivalry has helped to put up the price from £5 to £6 which is remunerative to the producer to £10–£12 per ton. Hides and skins are similarly affected, and are now adulterated with blood and sand. In the interest of the peasantry, Government has been forced to intervene and restrict all dealings within a certain radius of Kano to an authorized market where some degree of control is possible."

[1] *Indian Industrial Commission, Cmd.* 51, 1919, p. 10.
[2] *Reports*, 1921.
[3] *Reports*, 1922, p. 13.
[4] *Cmd.* 468, p. 42.

Sir Frederick goes on to say that as a result of the full investigation of the subject, he was convinced that "the only remedy for the improvement of the quality of produce and for the prevention of reckless exploitation of the soil by native owners whose only object is to make rapid profits is that merchants should employ expert buyers and pay according to quality, and that Government should inspect before shipment and refuse to allow shipment of inferior produce."

It is interesting to see how the Government is being obliged more and more to assist in preparing the staple crops for the market when it is a question of peasant production. In Nigeria the Government is setting up co-operative "fermenteries" for the cocoa-bean, as so much of it is spoilt by improper methods of native fermentation.[1] In India it takes active steps in the matter of grading and marketing the cotton.

The planter can grade, market, organize and advertise, the small man cannot, and the Government has to perform some or all of these functions.

Then there is the further need of the provision of seed or plants. Left to himself the peasant will never select his seed or plants. As there are in the Tropics no seed merchants or nurseries, as in England, from which a change of seed or renewals of trees may be obtained, the Government, in the shape of its agricultural stations, has had to act as the universal provider and one of its great functions is the distribution of seeds and fresh stocks of plants. In Gambia the whole of the ground nut trade on which the prosperity of the colony depended, was improved by the distribution of better seed by the Government, and it now buys the best seed every year from the traders and distributes it to the peasants on credit.

In Uganda 1,212 tons of cotton seed were distributed free in 1920, 600 tons were distributed in 1923 in Tanganyika, and pure cotton seed is also distributed in Nigeria. In India seed distribution has recently been done on a large scale by post, but an endeavour is being made to utilize the co-operative societies as media of distribution.

It is not enough to distribute seed, however. The peasant must have an object lesson how to plant and grow it. Hence demonstration farms distributed throughout the

[1] Davies, *J.R. Soc. Arts*, "Cultivation of Cocoa in British Tropical Colonies," Nov., 1923.

dependency have been the next step. There were 374 of such farms in India in 1915.[1]

The peasant does not, however, understand price fluctuations and if he is to grow a regular crop there must be a Government guarantee of a minimum price, especially in the preliminary stages of taking over a primitive savage people to cultivation for exchange. The cultivator has been urged to grow cotton. He understands that it will bring him the few luxuries he needs. He grows the crop, the price drops, he cannot get what he thinks he was promised, and he grows no more. There must be certainty at the outset with a new type of crop. The British Cotton Growing Association has, in fact, paid a guaranteed price to producers in Nigeria, although the market price fell below the guaranteed price.[2]

In dealing with a country like West Africa, where the planting element is small and where it is desirable to get the people to take up some settled cultivation instead of relying on self-sown forest produce which may become more and more difficult to obtain, the Government has started experimental farms in the middle of the peasant population to serve as object lessons. This is now being done on the Gold Coast. These farms differ, however, from the Indian demonstration farms in that they are communal plantations. The land is lent by the Government representing the " Stools ", i.e. the community as represented by the stools, for a period of fifteen years. The Government is to receive the produce till all expenses are paid, when it will be handed back with the machinery to the community. A sisal hemp plantation of 1,100 acres was started near Accra, and, between the rows of sisal, food-stuffs were planted. It is hoped that these plantations will form a nucleus for the native growers in the neighbourhood where the raw material can be treated by machinery. The chiefs are said to be keen on the project.[3]

A very interesting experiment is being tried in Papua of a " native plantation ". It is in effect a plantation carried on by the natives in partnership with the Government; the villagers work out their tax by clearing, planting, etc., while the Government superintends and provides seed and tools. Coco-nuts and rice are the cultures which have been

[1] Mackenna, *Agriculture in India.*
[2] *United Empire*, 1923, p. 163.
[3] *West Africa*, 27th November, 1920, p. 1502. Also *Report on Gold Coast*, 1921.

attempted so far.[1] The communal rubber plantations in Southern Nigeria were, however, a failure as everyone expected his neighbour to do the work, and the result was that forced labour was the only alternative if the plantation was to be worked successfully. The general supervision fell to the Forestry or Agricultural Department.[2]

Thus where the small cultivator is to be encouraged to grow a commercial product Government intervention is needed at every hand's turn. Seed, demonstration, credit, local marketing and inspection for export all become part of Government functions.

Many obstacles, unforeseen at first, have been found to stand in the way of improvement. Animal manure, for instance, in India is used as fuel and is therefore not available for agriculture ; a considerable difference will be made in Indian agricultural methods if coke becomes cheap enough to use instead. Again, if the system of travelling instructors or inspectors is instituted and a native be appointed, he must, in the East Indies, be of a superior caste to those whom he is to instruct. Now a high caste man is not likely to take up the work of travelling instructor, and the peasant will not pay heed to a low caste man.

A very interesting Government experiment with small cultivators has been undertaken in the West Indies. The Royal Commission of 1897 on the West Indies reported a deplorable state of affairs in St. Vincent; low wages, a want of continuous employment, decreasing population and general discontent. Part of the grant-in-aid given by the British Government was used to carry out a scheme of breaking up the large derelict sugar estates and settling a population of negro proprietors under the supervision of the officers of the Agricultural Department, whose business it was to introduce new cultures. By 1899 land settlement had been carried out on 5,060 acres, and in 1910 the Government of St. Vincent settled 2,067 acres in its dependency of Union Island, a region of squalid villages. The result has been the creation of a class of small holders which is a valuable asset to the colony. The condition of the native population has improved, housing is better, and land which was formerly ill-cultivated or not cultivated at all is now yielding a rich return. Nevertheless, it was necessary for the Government to

[1] Paper by the Governor, Judge Murray, read before the Royal Colonial Institute, *United Empire*, June, 1923.

[2] Lugard, op. cit., p. 316.

maintain a benevolent hold over the negroes until they acquired settled agricultural habits. They had to be guarded against disposing of the holding or pledging it for debt. They were only allowed to retain the land on condition that they worked fairly intelligently and followed the advice of the agricultural officers.

In order to provide security for marketing the cotton crop a Government ginnery has been established since 1910. The cotton is purchased from the peasant, baled and sold. Of the ensuing profits, one-fifth is retained by the ginnery and four-fifths given back to the peasant. The peasants thus get immediate payment and a bonus later, and the Government is able to grade the produce and get the benefit of marketing in parcels of considerable size. Other schemes of land settlement have been made in St. Lucia, where a lime factory is run on a similar basis, and in Antigua the sugar factories entered into an agreement to purchase cane at a minimum of 7*s*. 6*d*. per ton from the small grower. In Carriacou, an island that was becoming rapidly depopulated and given over to fever-breeding mosquitoes, a new population has sprung up, crime is lessened, the labour supply is improved, the young people ceased to emigrate and better agricultural methods are generally adopted. Land Settlement schemes have also been successful in Grenada.[1]

It is interesting to notice that in the islands where the system of land settlement has been tried, there is more labour available for the planters or for public works. The standard of comfort of the peasant has risen to such an extent that he is willing to work more in order to earn more. Previously on a low wage he was shiftless, unreliable, and disinclined to work. The labour generally has improved in quality and quantity in consequence of land settlement.

A certain animosity seems to prevail against the big plantation. It is accused of exploitation of the best soils and of taking up the forest reserves which are necessary for the subsistence of the small man. It must be remembered, however, that the native is not the original owner of the country. He is usually descended from migrants who have driven out someone else. The native of a thinly populated country is a worse exploiter if given the chance than any other with his shifting cultivation

[1] On the whole subject, see *West India Bulletin* (Journal of the Imperial Agricultural Department), 1914, "Peasant Agriculture in the West Indies."

and his tapioca fields. The investor from abroad in making or losing his fortune makes prosperity and wealth for many of the natives of the country, and for those who have worked for him.[1] With the opening up of the country by the planter the villager learns new wants and needs money to satisfy them, and at the same time he is furnished with new markets, which, originally developed to deal with the plantation output, will also absorb peasant produce. Incidentally, the world has profited by fresh supplies of tropical staples. The progress of agriculture in the Tropics has been intimately bound up with the agricultural policy of the Government. The Government has decided whether it will or will not try to attract the planter, and whether it will assist him to get his labour supply, to what extent it will tax his exports and under what conditions it will allow him to obtain land. It has also decided whether and in what manner it will assist the native peasant, and whether it will try to attract and settle a new peasant population. It has also decided whether it will encourage the peasant at the expense of the larger holding, or whether it will try to develop a mixed type of agricultural tenures.[2]

The Government is faced with a difficult problem in countries that have a large and increasing population living on the margin of poverty, which is intensified by the subdivision of land and the uneconomic nature of the holding. This is a burning problem in both India and Egypt. In both countries the question of more land is urgent. Much is being done by irrigation to provide it in India, while the Sudan may afford an outlet to the peoples of Egypt, especially as large irrigated areas are being brought into cultivation for cotton.

Failing the provision of more land, intensive cultivation has become increasingly urgent, and an agricultural department is absolutely essential at that stage to try and introduce better and scientific methods. Of all the new factors brought to bear in the Tropics in the past century none is more important than the development of scientific agriculture, supplemented by entomology. While on the one hand the

[1] Willis, *Agriculture in the Tropics.*

[2] History proves that as so much of the agricultural prosperity of the peasant depends on the Government agricultural policy, that policy should be consistently pursued. There is nothing more fatal than constant chopping and changing or periods of slackness alternating with periods of energy.

doctors have begun to eliminate the effects of the insects which destroy man's body, the scientists have begun to work at the insects and fungoid pests which destroy the plant life by which man lives or from which he gains much of his livelihood.

Botanical gardens existed in the nineteenth century in order to acclimatize new plants. There was the famous Dutch garden at Buitenzog in Java and the garden at Peradeniya in Ceylon. The Indian Government brought the tea-plant from China and started the tea planting industry of Assam. For the British Tropics, Kew acted as a central distributing station, and it was through its instrumentality that the chincona tree was obtained from Peru and the rubber plant distributed throughout the East. Sir Joseph Hooker, Director of Kew Gardens, sent an emissary to Brazil to endeavour to secure seeds of the Para rubber tree. Of the seeds brought back only about a dozen plants were raised. They were sent out to Calcutta and all died. In 1876 Mr. Wickham, a British resident in Brazil, was commissioned to secure more seeds, and 70,000 arrived in 1876, and within a short time after their arrival some 2,800 Hevea plants started to grow in the greenhouses at Kew. These were the seeds from which the great plantation industry sprang. From Kew 1,919 plants from the Hevea seeds were sent to Ceylon. Fifty plants were sent from there to Singapore, but they all died. More plants were sent in 1877, seven of which were planted in the garden of the Residency of Perak. Twenty-two plants were also sent to Singapore. The trees flourished, and from these stocks Malaya was planted with rubber. "Within a comparatively short period no fewer than nine millions of seeds and plants were dispatched to Liberia, Nigeria, Uganda, Burma, Assam, Southern India, Sumatra, Borneo, Java, Christmas Island, New Guinea, Australia, Fiji, Samoa, China and Cochin China, Japan, Siam, British Guiana, Honduras, and the West Indies. Ceylon was also extensively indented upon, and did its part in distributing the indispensable seeds and plants."[1] This was the start of the plantation industry, which has virtually ousted wild rubber.

[1] *The Malay Peninsula*, Arnold Wright and T. H. Reid, p. 291. In "Rubber Cultivation in Perak", published in *Perak Museum Notes*, vol. ii, pt. ii, it was stated that applications for 70,000 seeds had been received in 1898 and 25,000 supplied, and applications were filed for 100,000 in 1899. This shows the importance of botanical gardens as seed distributing agencies.

In India the agricultural departments, though confining themselves mainly to the collection of statistics in the nineteenth century introduced the ground nut into Burma and American cotton into the United Provinces. In the West Indies the Imperial Department successfully reintroduced the cotton plant in the islands.

The work of importing new cultures began to give way towards the end of the nineteenth century to research and the botanical stations ceased to be only acclimatizing centres and became instead great scientific centres including chemists, entomologists, mycologists, veterinary surgeons, and agricultural engineers, as well as botanists.

Some of the greatest successes were obtained by working upon indigenous plants, picking out the best strains, crossing them, and breeding new plants along Mendelian lines.

In the West Indies it was not realized that sugar canes bore seed, but seedling sugar canes were discovered by the Department of Agriculture; better varieties of cane were evolved and distributed, and the yield of sugar was increased by something like 10 to 25 per cent by substituting the new varieties of cane. A new department of agricultural research was started in 1905 at Pusa in India, and important results have been obtained by evolving new wheats from native grains in order to combine the properties of "strength" with a straw able to resist rain and wind. An ear had also to be evolved of such a nature that it did not shed the grain easily. These Pusa wheats are winning prizes in foreign countries and establishing themselves abroad, while they promise to revolutionize the yields of India itself.[1]

By this means, when the seed has been distributed and grown on a large scale, not merely will the wheat yield be improved, but the danger of famine will be lessened. The triumph of these Pusa wheats is comparable to that of the Marquis Wheat, the seeds of which a few years ago were contained in an envelope, but are now staple wheat crops all over Canada and the United States of America.

When the officers of the Agricultural Department arrived in India they found in nearly every crop they studied an extraordinary number of mixtures. It is the object of

[1] In the Punjab a yield of nearly 57 bushels per acre was obtained from one of these strains. On the whole subject, see *Annual Review of Agricultural Operations in India.*

modern scientific agriculture to eliminate these variations in quality and promote the growth of good strains.[1] Rice is the most important crop in India. In Bengal the introduction of several heavy-yielding pure races of paddy has been successfully accomplished, and in Madras excellent results have been obtained by the isolation of high-yielding strains. The output in 1919–20 was 33,551,000 tons of cleaned rice, as compared with 24,201,000 tons in 1918–19. The estimated yield was 256 lb. per acre more than the previous year, and 42 lb. above the last decennial average.[2] The demand for seed greatly outruns the supply. It is obvious that in India and other peasant lands these pure strains, which yield so much better, will have to be evolved in Government agricultural laboratories and distributed from Government seed farms and the results brought home to the people on the demonstration farms.

It was found with regard to sugar cane in India that the good varieties of cane introduced through the Samalkota farm disappeared in eight years. Thus every eighth year the department has to be prepared to distribute new canes to make good the wastage as there are no nurserymen or seedsmen from whom renewals can be obtained. It is not merely a question of evolving a type once and for all, but it needs constant effort to keep up the standard already reached. It has also been found in Egypt that the cotton seed deteriorates after a time and new types must be bred.

It is not enough to evolve new varieties of plants from strains suitable to the climate and country, but insect pests, noxious weeds, and fungi have to be combated. Insect pests may be fought in various ways—their eggs may be destroyed, the parasites which check them may be stimulated, or a plant may be evolved which will ripen earlier or later, and so escape their ravages. One of the great successes of the entomological side of the Department of Agriculture in the West Indies was the discovery of the eggs of the moth borer which had destroyed much of the sugar cane for two hundred years previously. The eggs where possible were collected and destroyed, and a parasite was also fostered which preyed on the eggs. On the other hand, the new varieties of cane, having a stouter bark, made it less easy for the insect to bore into the cane.

The curse of the cotton planter is the cotton boll weevil

[1] On the development of scientific agriculture in India, Mackenna, *Agriculture in India*, 1915.

[2] *Report Dept. Overseas Trade on India*, 1921, p. 14.

and the pink boll worm. Egg destruction is compulsory in Egypt, attempts have been made to introduce the white quail, which is said to eat the eggs, and the agricultural departments are trying to breed a cotton which will come to maturity before the pest is at its height. The worm especially attacks the sea-island cotton, which ripens late. The loss was stated in 1920 to be 41 millions sterling in the United States and 17 millions in Egypt in one year.

After the plant breeders come the plant doctors. The fungus which destroyed the whole of the coffee plantations of Ceylon has been referred to. No mycologists were called in to deal with the disease till it was too late. Very different was the story with regard to cocoa in the island. The plants were attacked by canker, and by 1902 no less than 98 per cent of the trees were diseased and only produced 56 lb. to the acre. By 1907, when the disease had been scientifically tackled, only 3 per cent of the trees were affected, the production was 440 lb. to the acre, i.e. the yield was increased about eightfold.[1] A victory has also been achieved over the quinine canker. In India the rescue of the palm industry, the Areca nut industry of Madras, and the protection of the potato crop at Patna, were all triumphs of tropical medicine as applied to plants. But the great object is not so much to cure a disease as to breed a plant that will resist it, as in the case of rust in wheat. Otherwise the preventive of plant disease is to recognize it and treat it at once. There are no less than 60 known diseases of the tea plant alone. The planter used to keep the outbreak of disease a secret for fear it should lower the price of the shares of his company on the market. He now turns at once to the agricultural experts to find out how to combat it. "A scientific campaign can no more be conducted by amateurs than a military one." In the West Indies the planters hasten to the department, examine the experiments and their results, and plant accordingly. In fact the whole atmosphere is changed. The planters at Trinidad and Grenada voluntarily agreed to an increase of the export duties on their produce in order to provide larger funds for obtaining scientific advice and assistance in those colonies.[2]

[1] *Report* of the Governor, Sir H. A. Blake, on the Colony of Ceylon, 1907, p. 25.

[2] Sir D. Morris, speaking on the Dept. of Agriculture, *United Empire*, 10th January, 1911, reprinted in *West India Bulletin*, 1911. Also as *Cd.* 5515 (1911). Mackenna, op. cit., p. 103. For other successes in India, see India: Section, "Agricultural Methods."

We may at a conservative estimate claim that the increase and the value of the agricultural products of India, as a result of the labours of its agricultural departments, is already about 3 crores of rupees annually, or over £2,300,000. This is the result of only ten years' work. The cost of the department has risen from £58,742 in 1904–5 to £342,043 in 1913–14.[1] There was thus something like two millions sheer profit a year.

In India a Forest Research Institute at Dehra Dun was established in 1906, and considerable extensions were planned in 1920. One of its great features is the development of the commercial possibilities of forest produce such as utilizing bamboo and large grasses for paper pulp. New markets have also been sought for timber, turpentine, and rosin, and experiments have been made in seasoning timber.[2]

Weeds grow as rapidly or more rapidly than useful plants. In Queensland the prickly pear has already turned 20 million acres to desert and is proceeding to add a million acres every year to the toll. The agricultural department of Queensland is working at the problem of its extermination —at present without success. In other cases, the interaction of herbage and insects may make a great deal of difference to tropical existence.[3]

Agricultural departments would be incomplete without the chemist, who can measure the soil contents and advise as to the proper manures which shall help the plant to grow better. A chemist is also needed for expert advice on the preparation of the crop for the market. Veterinary officers are also necessary to study the diseases of animals which do the ploughing and the draught work, and to develop new animals as the botanists breed plants. In addition the departments work at the improvement of local machines and the introduction of better implements. The agricultural department in India keeps a staff of agricultural engineers

[1] Mackenna, *Agriculture in India.*

[2] *Work of the Forest Dept. in India,* 1920.

[3] For instance, a new fodder plant, Efwatakala grass, was discovered in 1921. This is not merely palatable to animals, but it has an odour which is said to keep away the tsetse fly, and if planted by the road it will, so it is thought, keep the fly off travellers and animals as the fly will not cross it. It is being cultivated at Kew, and seeds have been sent to Nigeria and Uganda for testing. *Times,* Jan., 1923, quoting Kew *Bulletin,* No. 10, 1922.

to bore wells, erect machinery in local mills for sugar and oil crushing, and advise on the use of machinery in agriculture. In the West Indies the department has assisted the starting of central sugar factories. The central factory in Antigua was so successful in its crushing by better methods that out of 6,000 tons of crystals 2,500 represented the gain due to improved methods, i.e. the new method of preparation increased the production by 40 per cent.

It is the object of all Agricultural Departments not merely to improve the staple culture but to introduce a series of cultures which will provide an alternative to the agricultural staple and act as a sort of insurance so that if one fail the other should be left.

When it is realized that the British West Indies, including Honduras and Guiana, cover an area but little smaller than the British Isles, and that in this area the whole standard of agriculture has been raised, the effects of scientific agriculture may be appreciated.

Sir Daniel Morris in 1911 quoted Dr. Watts as saying that the benefit to Antigua and St. Kitts alone would more than cover the expense of the Department. If the export of sugar from these two islands were taken at 25,000 tons and the value at £200,000, and if one assumes that the industry had only benefited 10 per cent by the new canes, the net gain was £20,000 a year.[1] Thus scientific agriculture in Ceylon, the West Indies and India has been distinctly a paying proposition, and agricultural departments with their team of scientists are now to be found throughout the British Tropics.

Education, Industrial Development, and Finance

Of the three stages in the Government policy with regard to natives—personal freedom, agricultural development, and a literary and technical education, the last was by far the slowest in making any headway. Facilities for a literary education were already provided in India before the Mutiny, but technical education in Government schools has scarcely begun even in India. The technical training of native peoples has hitherto been carried out by private

[1] Op. cit., *United Empire*, 1911.

firms, or through the agency of Government public works and research stations, and has already done something towards creating a race of skilled artisans for modern types of work. Technical training has hitherto proceeded in the same ratio as railways, factories, and mines have been created.

The history of the development of a Government educational system in the Crown Colonies and India belongs more properly to a history of Administration than to that of Economic history. But education and economics are intimately intertwined in that education is costly and the resources which provide for it are fundamentally economic, i.e. land taxes, customs, or other forms of revenue. Apart from the moral benefits of a good system of education, the economic reactions are very striking. An educated native is a better customer, he has more wants, and to satisfy them he has to grow more things or work in other ways to satisfy his wants, the whole economic standard of a country rises when its people become educated, and from the mere material point of industry, trade and markets education of the right sort " pays ". A literary education, however, seems to create a distaste for agricultural and technical work. Mr. J. C. Jack, a District Officer, who undertook an inquiry into the conditions prevailing in Faridpur, Bengal, published in 1916, states that " Only a few of the village lads go to school, and village schools are very primitive institutions. There is no prejudice against learning, but even the most careless observer must notice the tendency of lads who have gone to school to refuse to work in the field and to despise their unlettered fathers. Elementary education may be a very blessed thing, but it would seem that in an agricultural country it needs to be universal if it is not to prove a curse ".

When a literary education has prevailed for a generation or two, as in India, there are not enough clerical posts for the applicants, and this provokes riots and discontent and gives rise to a demand that jobs shall be created.[1]

[1] A British collector is quoted in Curtis, *Dyarchy*, p. 253, as follows : " The view of those who have received a literary education is that Government has educated us so as to make us unfit for any occupation our fathers ever followed or any we can of ourselves follow, therefore it is the duty of the Government to provide an occupation for which its education *has* fitted us. A not unnatural line of argument, but inevitably a cause of discontent." Sir F. Swettenham in a paper read before the Royal Colonial Institute in 1895 said that when an Eastern has been

The cultivator who pays a large part of the taxation in India, thus has to pay for schools which deprive him of the services of his sons, who may in the end not get a clerical post and are unfitted for anything else. In the early stages, however, more native clerks are wanted than the country can supply, and this is the case in West and East Africa at present.

A literary education such as is involved in the acquisition of the arts of reading, writing, and arithmetic has, however, scarcely touched the mass of people in the Tropics. Although a system of instruction was planned for India as early as 1854, it has hardly penetrated to the cultivator, and the percentage of illiteracy is very high.[1] What is true of India after three quarters of a century is true of other tropical regions of the Crown. Few agriculturists all over the world appreciate education. In Africa a man considers that he ought to be paid for sending his son to school, as he thereby loses the boy's labour. Nor does he always appreciate the finished product. Early in 1914 the Senior Native Member of the Legislative Council declared at a public meeting in Lagos that the indiscipline and vanity of the young men produced by the schools had become so intolerable that parents were discussing the withdrawal of their sons.[2]

In writing the decennial survey of India published in 1894, Mr. Baines stated that in the North-West provinces "a decrease in the number of pupils is the outcome of a higher standard of living which led to the curtailment of superfluous luxuries", of which education is, among the rural population, undoubtedly one of the most prominent, "and secondly to the experience of the deterioration in physical vigour of an agriculturist boy who has prolonged his school years to the unwonted age of 14 or 15 years."[3] He pointed out the great social difficulties of mixing different castes in the same school. "In some

taught to read and write very indifferently he seems to think from that moment that the Government is responsible for his future employment and in consequence the market for that kind of labour is overstocked, vol. xxvii, p. 289. In *The Journal of the Royal African Society*, 1923, p. 241, Sir L. Wallace said of Northern Rhodesia, "Every native is anxious for education, but the great incentive is to become a clerk and a typist and a town dweller."

[1] See p. 33.

[2] Lugard's *Report, Cmd.* 468, p. 60.

[3] *Moral and Material Progress of India*, 1894, p. 382.

provinces and among certain classes the degraded castes are allowed to sit either on the verandah or on a lower section of the floor than the rest and to deposit their books and exercises on the floor instead of handing them to the master." [1]

Neither the parents nor the sons of the agricultural classes see any value in " book learning ", and " the fitful devotion of the latter to the subjects of the IV. Vernacular Standard until they are wanted to weed or drive the plough cattle carries no conviction with it ".[2] The absence of a technically educated class out of which skilled artisans and foremen can be made has placed the industrial organization of the factories in European hands. The Indian Industrial Commission of 1918 is urgent on the necessity of an industrial and technical training, but how they are going to get a nomadic class of factory hands to undergo that training is quite a different matter. Higher wages to be gained by a more competent man is no incentive. The labourers " do not as a rule increase their output when engaged on piece-work, they work fewer days in the week ".[3]

The difficulty of a really efficient system of education and especially of rural education is largely economic, and rests on the fact that a modern system of education is costly. The teacher, if he is efficient, must be well paid or he will take up clerking or other forms of literary work. School buildings and equipment cost money, inspection is expensive. Teachers, moreover, must be adequate in numbers. In Southern Nigeria, Sir F. Lugard said that there was one teacher to 148 pupils in the Government schools and one to eight hundred in the unassisted schools.[4] It is not easy in a non-industrialized country to get a source of taxation that will be sufficient to pay for a good education. Missionary schools do a great work as far as they go but they are regarded as sectarian, and therefore Mohammedans and Hindus remain largely outside their scope. A technical education is far more expensive than a literary one. Not

[1] Ib., p. 393.
[2] Ib., p. 396.
[3] *Industrial Cn.*, p. 15.
[4] *Cmd.* 1920, 468, p. 59. Sir Hugh Clifford reported to the Nigerian Council in 1920 (p. 196) that after two decades there was not a single native in the Northern provinces who was sufficiently educated to enable him to fill the most minor clerical post in the office of any Government department.

merely has the instructor to be well paid to leave his trade, but the materials and specialized tools are such costly items in a technical training. And then the technically trained man can very rarely *teach* his art. Technical schools are accordingly often a great disappointment. In Elizabethan England everyone had to have a seven years' apprenticeship unless he were "a gentleman born or a scholar of the University",[1] but in England there were trades already in existence to which a boy could be apprenticed. The caste system also provided for an hereditary training within the caste. But in British Africa, except among the Baganda, there is no technical background to work on, and the training has to be created *ab ovo*. In England a system of technical training was not evolved to fill the gap left by the breakdown of apprenticeship till 1901, and followed on a century of literary education.

In addition to the cost of a good system of education, which is almost prohibitive for an agricultural tropical country, there is the difficulty of the language in which instruction shall be given. In India thirty or forty distinct languages are enumerated by experts, but the number of dialects is much greater. In one province of Nigeria there are sixty languages. It would be so expensive as to be prohibitive to get teachers for all languages and all castes. The distances the country children have to come to a centralized school are also an obstacle, especially where there is a want of will. A Commission is now sitting at the Colonial Office to see how a better system of education can be devised for the tropical colonies. Apart from school training a considerable education is gained by the sheer travel on railways, the meetings of co-operative societies, attendances at markets and agricultural shows. Work on the estates of the agricultural or forest departments, or in connexion with the animals in the veterinary department is also a training ground. Litigation itself is an educational factor. A man is not necessarily a fool because he cannot read or write. It merely means that he is less likely to get into touch with the outside world and modern opportunities. But if he makes two or three pilgrimages by railway or goes as an indentured coolie to the West Indies or to Ceylon or is hired as a Kroo-boy on a cable ship he is likely to get an education from life itself. The

[1] 5 Eliz. c. 4, Statute of Artificers.

railway is, however, the greatest of all educators in the Tropics, for one of the most important technical training grounds has been in the past the construction, operation, and repairs of railways and railway equipment.

Industrial training in India was confined to certain castes, and as a man was born into a caste those outside could not learn the trade. The industrial education of the Indian coolies began when they had to learn to make bricks, rivet railway bridges, and were trained to fire and drive locomotives. The railways themselves started mechanical engineering in India by establishing locomotive and carriage building shops. There are over seventy such shops, and they are distributed all over India The East India Railway locomotive shops at Jamalpur has 11,000 hands, the great Indian Peninsula shops in Bombay employ 10,000, and the North-Western shops at Lahore a similar number. These railway workshops have been the main training ground for engineering artisans of every class.[1]

In the same way the railways have begun the industrial training of the native in Nigeria.

The technical training was continued in India by the engineering required for Public Works such as irrigation, sanitation and waterworks, and ordnance factories.

The writer of a report on India during the thirty years from 1857–87 said, "If engineers and artificers of the present day in India are unable to rival the beautiful structures left by dynasties that have passed away, the field of employment for masons, carpenters, and artificers in India is wider and larger than it ever was before ; and some of the great works of Indian railway and Indian hydraulic engineers, works put together by native Indian workmen, are worthy monuments of the first thirty years of the direct rule of the Queen in India." [2]

When the factories developed they, too, proved to be new training grounds for an agricultural people. In India, a great cotton industry has been developed in factories, by native capital around Bombay, large jute mills have existed round Calcutta since 1858, in Burma there are many rice mills for the husking and polishing of rice, though much of it was exported to Germany for that purpose before the war, and in all parts of India small factories

[1] *Indian Industrial Commission*, p. 26.
[2] *C.* 5713, 1889, p. 25.

of different kinds are springing up. There are saw mills, flour mills, oil mills, paper mills, woollen mills, and pottery works. Coal is extensively mined in Bengal and in two other provinces, huge iron and steel works have also been erected in Bengal, but at present the Indian factory hand is still partly a cultivator and does not willingly go into or stick to factory work, his average factory life being about 1½ years.[1] Like the Russian, the Indian worker was a landowner who only worked for others because his land was insufficient to keep him, and having earned a little money he returned to the land. The factory population of India has been very migratory, and it has been difficult to keep a man long enough to turn out a really skilled hand, and this was especially felt among the engineers, and has made it almost impossible to get good Indian foremen. The migratory character of Indian labour has been ascribed by some authorities to lack of housing accommodation, which prevents a man from bringing his family with him. There is in India an idea that industrial work is lowering as compared with agricultural or literary work, and this militates against any but the lowest castes engaging in industrial work. For them, however, it is the great chance of obtaining a technical training previously denied them by the caste system, and because they change so often the technical training penetrates among larger numbers than those employed at any one time.

Industrial development in the tropical areas outside India is almost non-existent. Tin smelting works at Singapore, cement works, ship repairing and ship building in Hong-Kong, exist under European supervision. The oil wells and asphalt works of Trinidad are of the nature of industrial undertakings. In certain colonies there are sugar crushing works on a large scale as in Antigua, in others fruit canning factories are to be found, as in Fiji or Singapore, for pineapples. The export of canned pineapples from Malaya in 1923 was valued at £685,401. In Rhodesia there is a meat canning factory, and there are flour mills in both Rhodesia and British East Africa. In

[1] "I remember a crying need for unskilled labour at a factory under erection near a town devoid of any industrial population. Famine had been declared to exist in a neighbouring district, yet it was most difficult to obtain labour for the factory. The famine district was purely agricultural, and no man would move without his family or was inclined to leave his land at all, even temporarily." "Labour in India," H. A. Young, *Edinburgh Review*, April, 1921, p. 287.

all the tropical colonies there are ice factories. But since it is possible to enumerate almost every industrial establishment, it is obvious that anything in the nature of industrial development in the British Tropics outside India, has not gone far.

Education, as we have seen, has been closely bound up with finance, which is the crux of most of the questions of the Tropics. A paternal Government has so much that it wishes to do, and the capacity of a backward people to furnish the money for doing even the barest necessaries is so small. And yet taxation is in itself one of the great educative forces which the British are bringing to bear on the Tropics. The protection and training of native peoples is bound up with the system of taxation. The development of the resources of tropical countries depends, however, to a great extent upon the possibility of raising loans to start public works. On these loans interest has to be paid, and this means further taxation. Thus the taxable capacity of a country sets a limit to its borrowing powers, which again limits its progress.

In a country where civilization is being built up painfully any act of the Government in the direction of taxation has all sorts of reactions that would not be felt so vitally in more developed communities. For instance, taxation may affect the labour supply by driving native inhabitants out to earn the money to pay the taxes. It therefore helps to promote technical training, as the native learns new methods when he has to work at other things than the tending of cattle. Or native peoples may refuse to cultivate if taxed too highly. If a man cannot reap he will not sow. They may equally decline to cultivate a surplus if not taxed at all or taxed at too low a rate, as then they need make no effort to raise more than they require for themselves.[1]

Taxation is a necessary corollary of the abolition of slavery. Tribute has often been paid in the form of slaves, concubines, food and unpaid labour, and the chief must be compensated for the loss of these. If there is to be peace he cannot be reduced to poverty, and revenue must be obtained from somewhere to give him a salary or allowance. To avoid the extortions practised by native rulers it was

[1] "It was reported in Northern Nigeria that in districts where taxes had formerly been paid to the Fulani but had lapsed, considerable areas had gone out of cultivation and the male population . . . had taken to drinking and quarrelling." Lugard, op. cit., p. 235.

essential in both Malaya and Nigeria that the revenue should be collected by Government officers and paid into a Government treasury, but the net result was that every chief in the country was immediately deprived of his income and the new British Government had to provide for him instead.[1] It is not easy to destroy one system and set another up in its place, as there is usually a deficit in the interval, especially when people who regard the English as deliverers do not see why they should pay them any taxes at all.

In practice the bulk of taxation is levied indirectly. There is less opposition from the natives and indirect taxes are easier to collect as the greater part of them come from the customs in the shape of export and import duties.

Direct taxation is, however, strongly advocated by many experts, and it has assumed various forms. A levy on property equivalent to an income tax is taken in Nigeria.[2] Hut taxes are raised in Sierra Leone, Gambia, Uganda, Nyasaland, Northern Rhodesia, Bechuanaland, and a poll tax in Kenya and Burma. An income tax exists in India, but agriculture is excluded from its operation as the peasantry pay the land revenue.[3] The arguments in favour of direct taxation are that it gives the native a sense of personal responsibility, it necessitates close contact between officials and natives in the assessment and collection, and promotes mutual understanding. The reliance on the land revenue in India for so large a part of Government income makes the Government the partner in the prosperity of the land. Another advantage is said to lie in the fact that the native must sell produce to get money to pay taxes, and in that way he becomes habituated to the use of coin, and this makes for personal freedom. It is held that direct taxation compels a man to work, whereas indirect taxation can be avoided by the mere abstention from consumption.

Native peoples have usually been accustomed to some

[1] "The allowances of one very long list of Malay Rajas and officers and the pensions of another made the Residents' early days a perpetual nightmare, a ceaseless struggle to make bricks without straw." Swettenham, *British Malaya*, p. 225. For the way in which the Emirs were dealt with in Nigeria see Lugard, *Dual Mandate*, p. 253.

[2] *Cmd.* 1600, 1922, "Report of a Committee on Trade and Taxation for British West Africa," p. 8.

[3] A controversy arose in 1922 over the tea plantations, which claimed exemption from the income tax on the ground that tea growing was agriculture. A certain proportion of the income was, however, reckoned to be trade, and taxed as such.

form of taxation or extortion. The chief resided at the capital, the district was governed by one of his minions or favourites who dared not leave the court for long for fear there should be intrigues against him, and he would delegate the collection to tax-gatherers, whose chief aim was to satisfy their master by as large a yield as possible while feathering their nests at the same time. A forced levy was often paid in slaves, and this encouraged slave raiding. Any prosperous individual attracted undue notice from his overlord, and pressure was applied to him to succour his ruler financially. This discouraged effort in India, Egypt, and Malaya, for instance, and limited the efforts of individuals and the accumulation of wealth, and thus produced stagnation. On the other hand, these levies, though often crushing, were irregular and often evaded. An elaborate system of assessment is necessary to ensure perfect fairness in the collection of taxes, and this is difficult to accomplish in backward countries like East and West Africa and the Sudan, and, though fully worked out in India, still gives rise to acute controversy there. In spite of the fact that direct taxation is good for the soul,[1] the best yield is from indirect taxation,[2] probably owing to the greater ease and cheapness of collection. Taxes are taken on both imports and exports, revenue is also obtained from the profits of railway working, licenses, and court fees, but customs duties have been by far the most important item.

The interesting thing is the large part the export duties have played in the revenues of tropical colonies. Export duties on indigo, jute, lac, oil seeds, opium, and rice formed part of the revenue system of India up to 1882, when only the two latter were continued, hides being added in 1918. The export duty on tin has been the mainstay of the

[1] The High Commissioner of Uganda expressed the view that the direct tax "will prove to be the making of the country, not only because of the revenue it brings, but because of the habits of work it inculcates which are rapidly altering one of the natural characteristics of the people". Quoted Lugard, op. cit., p. 235.

[2] The proportion in percentages of the colonial revenues in West Africa derived from Direct and Indirect Taxation between 1911–20 is given in *Cmd.* 1600, "Report on Trade and Taxation British West Africa," 1922, p. 7.

	Nigeria.		*Gold Coast.*		*Sierra Leone.*		*Gambia.*	
Average	*Direct.*	*Indirect.*	*Direct.*	*Indirect.*	*Direct.*	*Indirect.*	*Direct.*	*Indirect.*
1911–21	10·4	89·6	—	100	10·7	89·3	4·9	95·1

revenue of Malaya to which a rubber export duty was added. Export duties on cocoa, palm-oil, kernels, nuts, hides, and skins, timber, and tin, form a large part of the revenue of the West African colonies.[1] Railway receipts also form an important part of the general revenue in West Africa.[2] In the West Indies export duties were also levied after 1895, in spite of the theoretical objection to them.[3] In West Africa before the war a large proportion of the revenue from imports came from trade spirits which were prohibited in 1919, and thus the colonies were deprived of from 50 to 66·9 per cent of their Customs Revenue. When there is no prohibition, duties are imposed on such articles as liquor and opium for deterrent reasons, but they yield a good revenue. In the Straits Settlements a considerable sum has been raised from farming out pawnbroking, opium establishments, and gambling houses to the Chinese, the idea being that the Government penalizes these vices and at the same time supervises them. The salt tax is the great revenue-yielding excise duty in India. Although very low the universality of the demand by a population of 319 millions makes the tax fairly profitable.[4]

The difficulty about all taxation in these primitive countries is that there is so little to tax. The maintenance of peace, roads, railways, education, sanitation, scientific experimentation, hospitals, and dispensaries all mean money, and it is difficult to meet the needs of a modern state from the slender resources of tropical communities. They

[1] In West Africa the proportion in percentages which the Import Duties and Export Duties bore to the whole revenue of the several colonies in 1920 were as follows, *Report*, op. cit., p. 10.

1920.	*Import duties.*	*Export.*
Nigeria . .	34·1	12·3
Gold Coast . .	45·7	15·6
Sierra Leone .	47·9	15·9
Gambia . .	64	10·4

Export duties also obtain in French West Africa and the Belgian Congo, op. cit., p. 71.

[2] In 1920 the railway percentages of the total revenue were 23 per cent in Nigeria, 19·8 in the Gold Coast, and 20·3 in Sierra Leone, op. cit., p. 13.

[3] For export duties on articles exported from the West Indies see p. 69 of the same report. For an argument in favour of export duties see Bruce, Crown Colonies and Places, ii, 237–47. He says "There cannot, I think, be any doubt that to the mass of the population in the West Indies the collection of direct taxes is not only directly hateful but has the effect of alienating the sympathies of the people from the Government and obscures their recognition of the advantages which as I have endeavoured to show the proceeds of taxation are devoted to conferring on them."

[4] For details of the revenue in India see p. 385 f.

especially resent high taxes imposed by an alien ruler. To lead a people from a primitive to a more developed stage needs money at every hand's turn. Yet unwise financial measures handicap a country, stultify effort and encourage barbarism.

It is interesting to notice that Europe had to face much the same problem when it freed the serfs. A money economy had to be substituted for labour dues if serfs and peasants were to be really free. In this France led the way after 1789, not merely in France but in the regions she occupied and conquered. One of her great gifts to Europe was a modernized system of taxes to replace the feudal levies. It is true that Napoleon organized a modern system in order to get money more effectively from the conquered districts, but nevertheless he took a large part of Europe over to a modern financial administration and orderly design in government. As in Europe under the French, so in India and the tropical colonies under the English in the past century.

The right organizing of the revenue and its fair collection lay at the basis of all tropical development, and yet it often seemed a hopeless task to try to develop a modern system with the difficulty of raising an adequate revenue to pay for it. It is the old tale of bricks without straw. A primitive people can pay so little and needs so much. It is only when one studies the early history of India, Egypt, Nigeria, and Malaya before the British occupation, and sees the way in which extortionate tax-gathering can ruin a country and reduce people to slavery, virtual or actual, that the importance of proper financial methods can be realized.

If people do not pay in coin they must pay in kind, and are restricted to one spot to raise the produce or give the labour required from them. Thus, a system of coinage and regular but not oppressive taxation means enterprise, trade expansion, and individual liberty.

England will keep the external peace, she will give a grant-in-aid for a few years or guarantee a loan, but she does not expect to go on finding grants-in-aid over a long period of time. Her theory is that a colony must pay for itself either by taxing its own people or by attracting in capitalists who will develop the country and be taxed themselves in mining royalties, or by providing something out of which export duties can be taken, or similar methods.

She has so far avoided the enormous outlay which France has made on her overseas possessions, although her contributions towards the colonies have been generous in the past.[1] Mr. Joseph Chamberlain began the policy of advancing loans at a low rate of interest to develop the tropical colonies, and in 1920 the British Government was prepared to advance loans up to 50 millions sterling to foreign countries and His Majesty's Dominions outside the United Kingdom.[2]

A necessary concomitant of an organized system of taxation is the introduction of a metallic currency. Taxes may be taken in kind by native rulers, as they were in India for centuries before Akbar (1560–1605), who demanded coin. Land rents are still taken in kind in many places by local rajahs. In India the ruler and the grower divided the village grain heap, according to immemorial custom. In good years the share was larger, in bad years there was an automatic reduction. But there were serious difficulties in this method; grain had often to wait for the division till it was spoiled, and the peasant had to live on borrowed grain till the division took place.[3] There was so much chicanery in keeping back grain that an extra cess was levied to compensate for this. The tenant disliked the division of the grain because of the constant supervision to which he was subjected in order to see that he did not secrete the crop. Moreover, the transport of the grain was a great difficulty for the revenue collector. As a matter of fact, when the English took over undeveloped countries, they were obliged in many cases to continue these collections in kind, as in Northern Nigeria, and found considerable difficulty in realizing these payments. In other cases they had to accept the token money in vogue, and realize it as best they could, as in Assam.[4]

[1] pp. 93–8.

[2] 11 & 12 G. V, c. 26, and 13 G. V, c. 4 (1922).

[3] Sir Theodore Morison (*Economic Transition in India*, p. 63) quotes a case where rice cut in October was still undivided and not even threshed or winnowed in February. It lay rotting while the wretched cultivators were almost starving on grain borrowed at ruinous interest from the moneylender.

[4] "The introduction of a coin currency into Assam took place in 1820. Prior to that the currency consisted of cowries or small shells. The revenue of the district was fixed at 2½ lakhs of rupees paid in cowries at the rate of 5,120 cowries to the rupee. Huge cellars were required to contain these cowries and their transport to Dacca required a large fleet of boats; the cost of transport amounting to ten per cent of the takings exclusive of depredations. An enterprising collector, Lindsay by name, spent

This is the stage which obtained in England itself in the twelfth and thirteenth centuries, when the King took his taxes in wool and the feudal lord the best beast or the best chattel.

The next stage is one where the central Government demands payment in coin and fixes the revenue or taxation not on the basis of an uncertain yield, but as a definite amount to be forthcoming at a definite time. To supply the coin a local moneylender or trader arises, buys the produce the native has to sell, often at his own low rates, and furnishes the cash required for taxes. Thus trade develops as the purchaser or moneylender has to sell the goods against which he has advanced the coin. This merchant-moneylender, while performing a valuable service, usually gets the peasant into his clutches, and a condition of rural helotry arises. England faced this problem by expelling the Jews in 1290, but even then, so necessary is it to have an intermediary who will provide currency that the business was carried on by the " Pope's merchants ", the Lombards, whose arms with the three golden balls adorn our pawnshops to-day. The Jews and the Germans performed the same service for the Russians in the nineteenth century, and the transition in India is one of the problems confronting administrators to-day. There is no more difficult stage in economic history than that involved in getting people over from a " natural " to a " money economy ", as it gives rise to so much extortion on the part of the person who provides the coin. It is a great problem at present in most of the British tropical dependencies, as it was in the time of old Greece or Rome or in modern Germany, France, and Russia.

It is also possible for the Government to make a substantial profit over the introduction of a metallic currency, as did the English kings from time to time from the thirteenth to the sixteenth centuries. Even the great Eliza did not disdain to make a profit on the recoinage of 1563. The introduction of a silver currency into West Africa has recently been quite a paying transaction for the British Government.[1]

the cowries in getting out limestone which he realized for rupees, which he remitted. There was a handsome profit on this transaction, which he seems to have considered was his own perquisite, for he tells the story and says, 'This was the foundation of my fortune.'" Quoted from *Lives of the Lindsays*, by Sir C. Lyall, " Assam," *J.R. Soc. Arts*, 1903, p. 631.

[1] *Report on West African Currency*, 1912. See p. 98, n. 1.

Tropical Medicine and Sanitation.

As we have already seen, three great events coincided which made the Tropics into new economic possibilities; they were the invention of mechanical transport in the shape of the railway and the steamship, the development of scientific agriculture, including plant-breeding and the combating of insect and fungoid pests, and the development of tropical medicine. It is difficult, however, to know which to place first in importance, although historically speaking tropical medicine is scarcely a quarter of a century old, and therefore comes last in point of time. But it is obvious that the question of man power in the Tropics depends upon man being kept alive, and man's efficiency on his being kept reasonably "fit", either as a supervisor or worker. So much of the "slackness" of the native in the Tropics is due to disease and parasites that their elimination may lead not merely to an increase of numbers but to a great increase in the working power of each individual.[1] The epoch-making discovery by Sir Ronald Ross that the female mosquito conveyed malaria to human beings was one of the biggest factors in altering men's attitude towards the Tropics. It gave a new hope that work in the Tropics might mean life and health instead of the usual disablement or a rapid and unpleasant death.[2] English sanitary authorities had already worked out many of the principles of preventive medicine, and this too contributed towards a healthier life in the Tropics, especially in the towns.

Writing of India, Sir Bamfylde Fuller says :—

"Whatever may be the effect of the Indian climate there can be no doubt of the enervating and exhausting influence of the malaria by which the country is pervaded. It is not only that it causes great mortality; this might

[1] "From what has been said it will be clear that the progress of health administration in India as a whole and the control and eradication of communicable disease are matters of vast economic concern to the industries of India. The writer is firmly convinced that an improvement in general health conditions is a necessary preliminary to industrial as well as to all other forms of development." Major White, Sanitary Commissioner with the Government of India in *Indian Industrial Cn.*, p. 460.

[2] Writing of the West Coast of Africa in 1867 Dr. Horton said, "Not only has the European on leaving home a melancholy foreboding of a speedy termination of his existence, but his friends and relatives also reckon him from the day of his embarkation as amongst the dead."

perhaps be suffered by a dense population without much industrial injury. From the economic point of view, its most harmful effect is the demoralization of the people by ill-health—a general loss of stamina showing itself in a listlessness of demeanour which an observant visitor will notice everywhere . . . Over many parts of the country the inhabitants are saturated with malaria, and its prevalence accounts no doubt for much of the apathy and listlessness which deaden the spirit and the industry of the people. Fever denies India a chance of being industrious." [1]

Sir Ronald Ross stated in his *Memoirs* that in India something like 1,300,000 deaths were officially estimated to have been caused by malaria in years when it was not exceptionally prevalent. Of 300,000 men in the army in India, 100,000 were admitted into hospital every year for malaria.[2] Malaria has kept Africa in the dark ages by infecting the children. It affects their mental development and paralyses the material prosperity of a country. Over half the children under five examined in Africa showed signs of the enlarged spleen due to malaria, and " there are reasons for supposing that most of the great infantile mortality among natives in tropical Africa is due to it ". This was Sir R. Ross' opinion in 1903–4.[3]

It is interesting to think of the difference it would make to the labour supply and the demand for goods in the world if these people lived, to say nothing of the increased happiness of being well. White men were also affected by mosquito-borne diseases—the French were estimated to have lost no less than 50,000 lives in Panama when attempting to build the canal.

Mr. Chamberlain at the dinner to celebrate the opening of the London School of Tropical Medicine in 1899, said: " The man who shall successfully grapple with this foe to humanity and find a cure for the fevers depleting our colonies and dependencies in many tropical countries and shall make the Tropics livable for white men, who shall reduce the risk of disease to something like the ordinary average, that man will do more for the world, more for the British Empire,

[1] Sir Bamfylde Fuller, *The Empire of India*, p. 323. See also p. 281.
[2] *Memoirs*, p. 115.
[3] *Proceedings Royal Colonial Institute*, " Malaria in India and the Colonies," vol. xxxv, pp. 7-8. It was said in the discussion that two out of every five Englishmen who went to the Tropics were formerly expected to succumb to the climate and disease.

than the man who adds a new province to the wide dominions of the Queen."

Malaria " occurs most of all in the richest and most fertile tracts of the world, it is the enemy of the pioneer, the traveller, the planter, the engineer, and the soldier. It may safely be maintained not only that many important undertakings and industries in the Tropics have been ruined by it, but that the progress of whole countries, some of which possess the greatest natural resources, has been retarded in consequence of this pernicious malady." [1] It is impossible for white men to live and direct tropical production if successive relays are always being decimated by yellow fever or disabled by malaria. Apart from the suffering to human beings it is economically difficult to exploit tropical plantations if the labour force is always being invalided or succumbs to malaria. Tropical jungle grows rapidly. In Malaya the rubber estates needed weeding every three weeks, in order that young rubber plants might not be smothered, and any interruption to the work was economically wasteful. The money for recruiting the worker was wasted and so was his time on the plantation.

A school devoted to the study of tropical medicine was opened in 1899, in consequence of a letter from Chamberlain addressed to the leading medical schools of the United Kingdom urging the importance of tropical medicine. This was subsidized by the Government and the Crown Colonies. Another school was started in Liverpool in 1899 by the West African merchants. All these schools were not merely training places for doctors, but were planned to carry out research into tropical diseases. Permanent research laboratories were also started in the British Crown colonies. The great thing, however, in addition to the knowledge was the effectiveness of the administration in carrying out that knowledge among people who had no wish to be cleaned up, and who were hampered by caste or religious taboos.

Sir Patrick Manson had discovered in 1877 that the terrible deforming malady known as elephantiasis was connected with mosquitoes. Sir Ronald Ross, seeking for the cause of " the million murdering death ",[2] discovered the mosquito to be the carrier of malaria in 1897. It was afterwards proved that yellow fever and many other diseases were transmitted by mosquitoes and other blood-sucking insects. The

[1] Ross, *Proceedings*, op. cit., p. 8.
[2] Ross, poem quoted *Memoirs*, p. 226.

Americans, who discovered the connexion between yellow fever and the mosquito, applied this knowledge on the grand scale when building the Panama Canal making that region fever free. British anti-malaria experiments had also been previously successful in Sierra Leone and Ismaila, but the British Colonial Office did not take the matter up energetically till the Americans demonstrated its feasibility. The methods of prevention adopted were all directed to stop the mosquito from breeding, either by draining swampy land, filling up pools, or by pouring oil over stagnant water where drainage was not possible, which stifled the larvæ, or by bringing a water supply into towns in pipes which did away with the necessity for rain barrels and other likely breeding-places. Europeans also learned the necessity of sleeping under mosquito nets. It is fairly easy to take precautions in towns but in the country it is quite another matter. It would not be easy, for instance, to exterminate midges in Cornwall.[1] This problem is being tackled in Malaya.[2] One difficulty lies in the fact that there is one kind of malarial mosquito which breeds in running water, and therefore infects the hilly country. Something is being done by the introduction of minnows of sorts—" millions "—to eat the eggs, which are apparently not very palatable. Eels, which are voracious and not over particular, have also been suggested as larvæ consumers. But one cannot abolish streams and rivers as one can drain a marsh. The result of the war on the mosquito up to the present is that life has become much safer for the European, the invaliding rate in West Africa dropped from 60·3 to 25·2 per thousand of non-native officials and the death-rate from 20·6 to 13·9 between 1903 and 1911.[3] In the Federated Malay States, as many as 334 patients from Klang and Port Swettenham were admitted to the hospital in 1901 as serious cases of malaria, and it was a question of abandoning the port. After drainage was undertaken the admissions dropped to an average of 29. In 1901 sick leave given to 176 Government employees was 1,026 days, in 1903 only 71 days to 226 Government employees. On Lake Nyasa the mission workers also suffered seriously. From 1895–1900 the average number of European workers was 24·4 per annum. Of these seven died and eight were invalided. After anti-malarial

[1] There are 200 different kinds of mosquito, but fortunately only a few convey malaria.

[2] Watson, The prevention of malaria in the Federated Malay States.

[3] *Cd.* 6089, 1912.

precautions were taken the annual number of workers was increased to 36 and there were only two deaths and four invalided. In Hong-Kong anti-malarial operations were commenced in 1901. In that year 1,294 cases of malaria were admitted to the two principal hospitals and there were 132 deaths. In 1904 the admission had fallen to about a third, namely 419, and the deaths to 54.[1] In Ismaila, where the Suez Canal Company wished to arrest the very serious sickness and mortality and called in Major Ross to advise in 1902, the figures are still more striking :—

1900, 2,284 cases.
1902, 1,551 ,,
1903, 214 ,,
1905, 37 ,,
1906, 0[2] ,,

There has been a great improvement in the health of native troops in West Africa, where the deaths declined by 75 per cent.[3] The West Indies generally have undertaken a campaign against the mosquito, with great improvement in the health of the community.[4]

Tropical medicine is also gaining a victory over other tropical scourges, such as liver abscess and dysentery. Another deadly tropical disease, sleeping sickness, has been traced by Sir D. Bruce to the tsetse fly, and apart from the precautions to be taken in the fly-belt the sickness is in process of being conquered and cured.

One great difficulty in the Tropics has been the inefficiency of the labourer. While the climate does not make for energy, the presence of the hook worm largely accounts for much of the listlessness and want of stamina. In Indian coolies this is largely due to the presence of the hook worm, which

[1] Bruce, *The Broadstone of Empire*, vol. i, chap. xii.
[2] Ross, *Memoirs*, p. 474.
[3] Bruce, op. cit., i, p. 403. Sir J. Goodwin gave the following figures of the European troops in India :—

	Per thousand.				
	Constantly sick.	Deaths.	Malaria.	Dysentery.	Cholera.
1878–82 . . .	68·1	20·5	569	42·8	5·7 (4·2 deaths)
1922	28·8	4·6	82	5·2	0·3 (0·2 deaths)

Quoted *Heath Problems of the Empire*, p. 52.
[4] Sir R. Boyce, *Health Progress and Administration in the West Indies.*

fastens on to the walls of the stomach and cuts the minor blood vessels, which produces anæmia and leaves wounds which probably predispose to other infections. "In the Madras Presidency little short of 100 per cent of the rural population are infected. Over 70 per cent of the tea-garden labour forces of Darjeeling are infected and a similar state of affairs is found to prevail in the plains of Bengal." [1] A conservative estimate shows that forty-five million wage earners in that country are infected with hook worm.[2] It has been found that a population freed from hook worms has a much higher standard of efficiency, the output being increased as much as 25 to 50 per cent in the tea gardens of Ceylon as a result of treatment for this parasite and the same increase of efficiency was found to be the case in the Darjeeling tea gardens. The interesting thing is that the hook worm apparently rendered the sufferer liable to other diseases and by lessening the hook worm there was a lessened prevalence of almost all diseases. This was found to be the case amongst negroes in the southern states of America. In Bilibid jail in Manilla the death-rate had been reduced by ordinary sanitary improvements from 234 per mille to 75. Then measures were taken for the elimination of hook worms and the mortality dropped to 13·5. There was also a marked improvement in the Assam gaols when the same measures were tried. "A thorough hook worm campaign offers perhaps the best opportunity of effecting a rapid improvement in the health conditions and consequently the efficiency of our labour forces," is the conclusion of Major White, the Sanitary Commissioner with the Government of India. "The human being," as he says, "remains the most important machine in the production of wealth and in industrial development. Viewed thus, all measures designed to improve the efficiency of the human machine are matters of economic importance that modern industry cannot afford to overlook . . . the question of man force is fundamentally a health question." [3]

Measures of malaria prevention are, however, recent,

[1] *Indian Industrial Commission, Cmd.* 51 (1919), p. 461, from which the following account is taken.

[2] *Health Problems of the Empire*, p. 196.

[3] *Industrial Commission*, p. 459. Suppose that in India only 10 per cent increased efficiency is the result. The 45 million infected labourers are earning something like 4,500 million rupees annually. An increase of 10 per cent due to efficiency would be 450 million rupees. This would cover the whole of the Indian War Loan in three years. *Health Problems of the Empire*, p. 194.

and are largely due to the magnificent advertisement of American success in the prevention of yellow fever in the Panama Canal zone. The anti-hook worm campaign has also owed much to American influence in the shape of the International Health Commission of the Rockefeller Institute. But the great sanitary reforms involved in a pure water supply, the cleansing of cities, the disposal of refuse and the prevention of infectious disease are due to the British doctors and administrators who worked in England in the 'fifties. The knowledge thus gained was transferred to India. Sir J. Strachey, writing in 1882, enables us to realize what this meant in some Eastern cities. "Compare, for instance, what Calcutta was twenty years ago and what it is now. This city, the capital of British India, supplies an excellent type of what has been everywhere going on. The filth of the city used to rot away in the midst of the population in horrible pestilential ditches or was thrown into the Hooghly, there to float backwards and forwards with every change of tide. To nine-tenths of the inhabitants clean water was unknown. They drank either the filthy water of the river, polluted with every conceivable abomination, or the still filthier contents of the shallow tanks. The river, which was the main source of supply to thousands of people, was not only the receptacle for ordinary filth, it was the great graveyard of the city. I forget how many thousand corpses were thrown into it every year . . . The place was declared in official reports by the Sanitary Commission in 1864 to be hardly fit for civilized men to live in. There are now few cities in Europe with which the better quarters of Calcutta need fear comparison . . . Fifteen years ago, in the great city of Rangoon, containing more than 100,000 people, with half a million tons of shipping, there was not a single public lamp, no supply of wholesome water, not a single drain except the surface drains at the sides of the streets, and no means of removing the night-soil and filth out of the town." [1] The mortality both in the barracks and gaols was frightful to think of, and all the troops suffered accordingly, but the improvement is equally striking.[2]

[1] *Finances and Public Works of India*, p. 4.

[2]

	Death rate per thousand.	
	British troops.	Indian troops.
1875–79	20·37	19·93
1880–84	16·30	19·00
1900–04	13·03	10·87
1910–14	4·35	4·39

Health Problems, op. cit., p. 128.

"Great is Sanitation—the greatest work except discovery, I think, that a man can do. Here is a city seething with filth and disease. What is the use of preaching high moralities, philosophies, policies and arts to people who dwell in these appalling slums—sometimes whole families of them crowded into one cell mixed with cattle, vermin, and ordure? . . . We shall reach the higher civilization not by any of the politicians' shibboleths, methods of government, manners of voting liberty, self-determination and the rest, all of which have failed—but first by the scientific ordering of cities until they are fit for men of the higher civilization to dwell in. We must begin by being Cleansers." So wrote Sir R. Ross.[1] And, indeed, before his epoch-making observations on mosquitoes and malaria, the British had undertaken the sanitary reform of many Indian cities. Ross himself had tried to clean up Bangalore in 1895 :—

> We cry, "God, make us Kings,
> Poets or Prophets here!"
> The scornful Answer rings,
> "First be My Scavenger."[2]

What does all this new knowledge of tropical medicine and disease prevention mean for tropical Africa? It means civilization. What does it mean for India? It means health and efficiency and the possibility of a great industrial development. What does this mean for the British Empire? It means that a new and vast and prosperous possession has been added to it. The result in the end will be one of the greatest of human triumphs. That bar which has prevented the progress of civilization in the Tropics is being removed. Not merely will the white man profit, the whole of the indigenous peoples will be raised to a new standard of health, wealth, and efficiency.

There is an inscription let into the pavement of Seville Cathedral to commemorate Columbus which says: "To Castile and Aragon he gave a new world." The work of researchers into tropical diseases, the work of the administrators in carrying out their recommendations has verily been to give a new world to mankind and to increase its powers and potentialities. Hence the growing value of the Tropics.

[1] *Memoirs*, p. 186.

[2] Ross, *Memoirs*.

BOOK TWO

SYNOPSIS OF PART TWO

THE LANDS OF THE CHARTERED COMPANIES

I. The Economic Development of British India since 1765

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BOOK TWO

PART TWO

THE LANDS OF THE CHARTERED COMPANIES

I. The Economic Development of British India since 1765

1. General Introduction

THE British Empire has been mainly founded by traders organized in companies. The advantages of company trading lay in the fact that a company does not die, and so there is a continuity of existence. When trading with undeveloped peoples, a corporation with a long life becomes a name and a power. Companies could also provide relays of capital if necessary as individuals could not. They could and did take risks that no Government would face, and they could, being only corporations, withdraw if necessary without loss of prestige in a way that would be impossible to a Government whose national honour would be at once involved. They were, moreover, economical in working as they had not the same standard of expenditure as a Government. Government servants must not make mistakes—it is the unforgivable crime—and so the tendency is naturally to play for safety. Companies, on the other hand, showed a flexibility and initiative and their officers developed a capacity for making sudden decisions that would not have been possible to any civil servant. Companies were, therefore, admirably adapted to do pioneer work, as Governments were later better qualified to organize an administration and to think in terms of future generations untroubled by questions of dividends or profit and loss of the moment.

It has been the function of British Chartered Companies to go in front of the nation and discover and organize a trade. Sooner or later this trade brings the company into conflict with foreigners or with native rulers and the Crown has had to intervene either in the interests of its own people or that of the natives, or to preserve order.

Very few of the great tropical continental areas were acquired, in the first instance, by the British Government.

In the temperate regions Ontario and New Brunswick were both creations of the British Parliament, and so were the convict colonies of Australia, but even here South Australia and New Zealand owed their start to Chartered Companies, and convicts were deliberately excluded. The Sudan and Somaliland were originally acquired by the Government for the defence of the Suez Canal, and Papua for the defence of Australia, but India, Malaya, British East Africa, and Uganda, the Gold Coast, Nigeria, Rhodesia, and North Borneo all trace their beginnings as British colonies to Chartered Companies, while Ceylon was acquired by the Dutch East India Company, from whom it passed to England, who made it into a Crown Colony in 1801.

Thus the most important parts and the larger continental areas of the British Tropics are a result of company trading, and the British Tropics are in origin a trader's Empire.

British India

All the tropical and subtropical countries within the Empire are relatively insignificant when compared with the great sub-continent of India with its 319 millions of people and its 1913–14 total of 336 million sterling of import and export trade. It has been since 1880 at least the largest single customer for British manufactured goods, and it has taken since 1918 a larger amount of imports from Great Britain than Canada, Australia, and the Union of South Africa put together. It has supplied the world with great quantities of raw material, such as cotton, jute, carpet wools, hides and skins, indigo for dyes, wheat, oil seeds, and rice for food. On the great export trade of bulky goods from India much of the British world shipping activities have been based.[1] 322 million pounds of the above total was sea-borne trade, mainly carried in British ships. It has been one of the great investment fields of British capital.

The Indian Empire consists of two parts : about two-thirds of its population, comprising 247 million people, is directly under British rule, and about one-third, or 71·9 million, under the native Princes. In area British India contains 1,093,074 square miles, and the States and Agencies 709,583 square miles. In extent it is equal to the whole of Europe, excluding Russia. Burma is as large as pre-war Hungary, the Bombay Presidency equals in size the Kingdom of Spain, the Punjab has as large a population as Spain and Portugal combined, Madras is larger than the United Kingdom, the United Provinces and Bengal hold each as many people as the British Isles, Bihar and Orissa as many as France, and the whole population is more than three times that of the United States.[2]

There are certain outstanding features both of geography and past history which must be grasped in order to understand the economic development of India in the nineteenth century. The first thing to realize is that India has no real

[1] For statistics, see *Stat. Abstract of British India*, 1921, *Cmd.* 1428. Sargent, *Seaways of the Empire.*

[2] Indian Constitutional Reforms, *Cd.* 9109 (1918), p. 110, known as *The Montagu Chelmsford Report.*

national unity such as is implied when one talks of England, Spain, or the United States. It is a geographical area containing a mixture of races and creeds, it has forty-seven principal languages and many other dialects, its peoples are, in Lord Morley's words, "marching in uneven stages through all the centuries from the fifth to the twentieth," but the bulk of them are in the stage of England at the end of the fifteenth century. Lord Dufferin, writing thirty years ago,[1] spoke of the "two mighty political communities", Hindus and Mohammedans, "as distant from each other as the poles asunder in their religious faith, their historical antecedents, their social organization, and their natural aptitudes; on the one hand the Hindus, numbering 190 millions, with their polytheistic beliefs, their temples adorned with images and idols, their veneration for the sacred cow, their elaborate caste distinctions, and their habits of submission to successive conquerors—on the other hand the Mohammedans, a nation of 50 millions, with their monotheism, their iconoclastic fanaticism, their animal sacrifices, their social equality and their remembrance of the days when enthroned at Delhi they reigned supreme from the Himalayas to Cape Comorin." He then enumerates other peoples of India almost as widely differentiated from these two as they are from each other—Sikhs, Rohillas, Pathans, Assamese, Baluchees, the hillmen of the Himalayas, the Burmese—Mongol in race and Buddhist in religion—the Khonds, Mhairs, and Bheels, and other non-Aryan peoples in the centre and south of India, and the enterprising Parsees. "At one end of the scale we have the naked savage hillman with his stone weapons, his head hunting, his polyandrous habits and his childish superstitions; and at the other, the Europeanized native gentleman with his English costume, his advanced democratic ideas, his Western philosophy and his literary culture; while between the two lie layer upon layer, or in close juxtaposition, wandering communities with their flocks of goats and moving tents; collections of undisciplined warriors with their blood feuds, their clan organization and loose tribal government; feudal chiefs and barons with their retainers, their seigniorial jurisdiction and their mediæval notions; and modernized country gentlemen and enterprising merchants and manufacturers with their well-managed estates and prosperous enterprises."

[1] Quoted in *Montagu Chelmsford Report*, p. 117.

This enormous variety of peoples and stages are a reflex of an equally complicated variety of economic conditions, so that it is almost impossible to make an economic generalization which is true for all India. Economic unity is being created by the railways, the British controlling power and the English language. A dawning sense of unity has been growing among the peoples of India, and this was quickened by the war and the common effort.

Lord Meston, speaking at Cambridge in 1920, said: "The British rule has now been acting for a century as a solvent of the hard combinations and the sharp antagonisms which we have seen to be the dominant features of Indian society since the Mohammedan invasions. The feudal system, except where we left it enthroned in the native States, has broken down. It is the British officer who now administers justice and takes the revenue from the land and protects the people." [1]

The interest of the economic historian is to watch this unifying process at work under the solvent of modern transport, modern agriculture, modern industrialism, and the modern demand for specialized raw materials. Even native states cannot hold aloof. When railway lines and telegraphs run through their territories, they are inevitably linked up with the railway system of the whole, and they are equally concerned with the British Government in the salt and opium revenues. But the divisions are still marked and the solvent scarcely told till the beginning of the twentieth century. The mass of the Indian peoples are still purely agricultural, inarticulate, uneducated, and isolated. The solvent has only affected a small minority as yet, but is having important reactions. According to the *Moral and Material Progress Report* of 1923, only 18½ millions could read and write,[2] and only 1,700,000 of these could speak English. The solvent has had little chance to work through a literary education, and it is economic measures that are the active agent. For the whole nineteenth century, however, the divisions were as profound as Lord Dufferin described them.

Sir J. Strachey, writing in 1882, said,[3] "Scotland is more like Spain than Bengal is like the Punjab . . . There are

[1] *India at the Crossways*, p. 19.

[2] See chart, p. 235. "Of the 247 millions of British India only 8·38 millions are under instruction."

[3] *India, its Administration and Progress*, 4th ed., p. 3, ed. Holdernesse.

no countries in civilized Europe in which the people differ so much as the man in Madras differs from the Sikh, and the languages of Southern India are as unintelligible in Lahore as they would be in London. A native of Calcutta or Bombay is as much a foreigner in Delhi or Peshawar as an Englishman in Rome or Paris." " This is the first and most essential thing to learn about India—that there is not and never was an India, or even any country of India, possessing according to European ideas any sort of unity, physical, political, social, or religious, no Indian nation, no ' people of India ', of which we hear so much." One may therefore regard the economic structure of India during the past century as primitive and mediæval, but it is that of a mediæval country which is on the brink of the modern stage. The general effect on the mind of the economic historian is that of England of the early sixteenth century, when she too was becoming " modern ".

England in 1500 was not merely an agricultural country, but was just beginning to go over from an extensive to an intensive system of agriculture with a specialized production of wool. She was beginning to enclose her scattered strips into compact areas, which is the great problem confronting India to-day with its " fragmentation " of land. She was beginning to weave her wool into cloth on a large scale, just as India is beginning to make her cotton into piece goods, only English merchants were trying to concentrate the workers in workshops and the recent Indian development is a factory development. England in the sixteenth century was what India is to-day, an exporter of surplus food grains. The coal and iron of England in 1500 was as undeveloped as that of India in 1880, although both possessed great natural resources. England was beginning in the sixteenth century to enjoy order after the Wars of the Roses, just as India did under the English rule in the nineteenth century. England suffered from eleven famines and scarcities in the sixteenth century in the same way as India is liable to scarcities to-day. English sixteenth century roads were earthen tracks impassable in winter, English industry was organized in guilds, and foreigners, Germans, and Italians carried on the bulk of her overseas trade. She was supplementing her common law with Roman law then, much as the Indian codes have been supplemented with English Law in the nineteenth century, both countries adopting legal formulæ more suitable for an industrial and commercial

state. The analogy cannot, however, be carried too far as it is impossible to compare the England of 1500 with possibly 2½–3 million people, with the 185 millions of British India in 1871 or the 247 of 1921. The great diversities of races, languages, and climate which separate India did not exist in England. Nor did the English ever have the same sense of values as the Indian peoples, whose outlook on life is essentially non-economic. The Christian religion has insisted on the value of work, and the Western peoples are strongly imbued with an idea of "getting on", which is almost absent in India. But the transition from the mediæval to the modern, from a self-sufficing local basis to that of world exchange, from payments in kind to currency, from economic chaos to order, are part of the fascination of the economic history of India in the nineteenth century as they are of England in the sixteenth century.

Another great outstanding fact in the economic development of India arises out of its geography, to which much of the typical diversity and want of unity is due. It is usual to say that India falls into three divisions. The vast mountain ranges of the North—a hundred miles deep, in which rise the two life-giving rivers, the Indus and the Ganges, joined later by the Brahmaputra—constitute the first region. The great plains of stoneless silt brought down by these rivers and through which they flow is the second region, and the third is the mountainous plateau south of the plain—the Vindhya range being the barrier between the Gangetic plain and the Deccan.

On the ocean side of the Bombay Presidency there is only a narrow strip of land before the mountainous barrier of the Western Ghats is reached, therefore penetration inland on this side from the sea has been difficult and even the monsoon rains are intercepted by the barrier, and this renders the inland region liable to droughts and famine. Two channels inland are provided by the river valleys of the Nerbudda and Tapti, and up these the monsoon passes. The trade of this region has to be carried on along a narrow strip between the mountains and the sea. The peninsula tilts like the roof of a house from west to east, and the bulk of the rivers flow to the east. Here the Eastern Ghats constitute a far less formidable mountain barrier on the sea side, there is considerable space between the mountains and the coast, and the delta of the rivers provide much low-lying fertile soil. It is on this eastern part and in the river

plains of the north that the great mass of people are congregated.[1] On the extreme west is the great Indian desert. Therefore the peoples who invaded the Gangetic plain from the north-west did not penetrate very far into the hilly broken rocky country to the south of the plain, and the forests were in themselves a great barrier. Nor would the coastal people penetrate very far inland on the west owing to the barrier of the Ghats. The interior of the Deccan, broken up as it is into valleys, hills, and forests, made for the isolation of the peoples within its area and accounts for their backward condition in many parts and for the continued existence of non-Aryan peoples. The inhabitants became darker and darker as the penetration south thinned out and the economic conditions are correspondingly primitive till the coast is reached, when European conditions begin to tell through the trade contact.

There were, however, two accessible points—the north-west, down which the various Asiatic invaders streamed for seven hundred years, and in from the sea by the Ganges, up which the Europeans came. But prior to 1650 pirates, both native and Portuguese, infested the Hooghly and made it impossible for Europeans to carry on a regular trade, so that penetration by Europeans in the Bengal area was late.

Owing to soil and rainfall the Ganges basin was the richest part of India, and the ruler who held that region held the region which would give him the greatest financial strength. This region was, therefore, the great bone of contention. It was no accident that the extension of British territorial rule in India should have begun in this district. In 1757 Clive won Bengal at the Battle of Plassey, and the British Empire in India was largely built up on the resources of Bengal, the alien advancing up the river this time and not down.

Thus one of the causes of the infinite variety and relative backwardness of parts of India lies in the geographical configuration and the enormous contrasts between the different parts. "To one, for instance, who has gained his knowledge of India in Lower Bengal, India is a country

[1] According to the census of 1911 the Presidency of Bengal has 551 persons to the square mile, the United Provinces 427, Bihar and Orissa 344, Burma 53, Kashmir 37, and Baluchistan 6. In several districts of the Lower Ganges the density exceeds a thousand, in smaller units it approaches 2,000. More than a third of the population of India is found in the Ganges valley east of Delhi.

of almost constant heat and damp, luxuriant vegetation, rivers, tanks,[1] rice fields and coco-nuts, with few cities . . . densely inhabited by a mild and timid population." Move to Agra or Lahore, "Instead of one of the dampest and greenest countries of the earth, we find in the early summer one of the brownest and most arid—a country scorched with winds like the blast of a furnace," with a cold frosty invigorating spring. "Instead of the tropical vegetation of Bengal we find thousands of square miles covered with wheat and barley and the products of the temperate zone. It is a country with famous cities and splendid monuments," containing a manly and vigorous population.[2]

Another cause of the relatively static condition of India arises out of the appalling uncertainty of life and property that prevailed up to the nineteenth century owing to the invasions, civil wars, and oppressions of native rulers on the one hand, and to the failure of the rains on the other. The prevailing uncertainty was so great as to be a serious impediment to the economic progress of the mass of the people. Pillage and plunder, combined with gross extravagance and luxury at the Court for which the money was wrung from a poverty-stricken peasantry, were the characteristics of Indian economic life in the seventeenth and eighteenth centuries. Hence there was no incentive to effort since a man could never be sure that he would reap where he sowed.

The chief of the Dutch Factory at Agra in 1626, who had been seven years in India, said that "so much is wrung from the peasants that even dry bread is scarcely left to them for their food". The Dutch merchant who described Golconda records the country as "desolated by exactions", in Gujerat another speaks of the peasants forced to surrender the entire profit of the land.

The English factors reported from Surat after the famine of 1630 that "if the excessive tyranny of the Governors of all sorts would give the poor people leave but to lift up their heads in one year's vacancy from oppression, they would be enabled to keep cattle about them and so to advance the plenty which the earth produces".

The Frenchman Bernier, who spent from 1656–8 in the Moghul Empire, in his "Letter to Colbert", describes the tyranny by which the peasants' children were sold as

[1] i.e. artificial dams and lakes.
[2] Strachey, op. cit., pp. 3, 4.

slaves if they could not satisfy the fiscal demands. He declared that "the ground is seldom tilled except under compulsion, and no person is willing or able to repair the ditches and canals; the whole country is badly cultivated, and a great part is rendered unproductive for want of irrigation. No adequate idea can be conveyed of the sufferings of the people. The cudgel and the whip compel them to incessant labour for the benefit of others".

Tavernier, who travelled in India between 1640 and 1660, confirms the general impression. "The peasants are reduced to great poverty, because if the Governors become aware that they possess any property they seize it straightway by right or by force. You may see in India whole provinces like deserts, from whence the peasants have fled on account of the oppression of the Governors." Pelsart says, "This is a short sketch of the life of these poor wretches who in their submissive bondage may be compared to poor contemptible earth-worms or little fishes which, however closely they may conceal themselves, are swallowed up by the greater monsters of a wild sea. Now we shall write a little of the manner of life of the great and the rich, but in order to do so we must entirely change our tune; for the pen which has described bitter poverty clothed with the woeful garment of sighs, the foe of love, friendship, and happiness, but the friend of loneliness wet with the daily dew of tears—that pen must entirely change its style and tell that in the palaces of these lands dwells all the wealth there is, wealth which glitters indeed, but is borrowed, wrung from the sweat of the poor." [1]

In the eighteenth century not merely native rulers but invaders added to the tyranny. There were six inroads into India in twenty-three years. An invasion meant that a host of twenty to a hundred thousand barbarians marched over the country paying for nothing, eating up town, cottage, and farmyard, burning, slaughtering, sacking, and finally massacring wholesale.

The three great devastating factors of the eighteenth century were firstly the Mahrattas, who became freebooting companies under daring captains. They wasted the country, cut off supplies and stragglers, and levied tribute. Secondly, a Persian army devastated the Punjab and sacked Delhi. In the massacre which followed eight thousand

[1] These extracts are taken from Moreland, *Akbar to Aurangzeb*, pp. 200–2.

were killed in one forenoon in the streets, the city was set on fire in several places, and the plunderers went off leaving the capital "stripped, burned, and desolate". Thirdly, there were five Afghan invasions in which Delhi was sacked again and "the citizens exposed to every foul enormity which a barbarian could practise on a prostrate foe".[1]

In addition to the great organized invasions, the smaller hill tribes every autumn rushed down upon the miserable hamlets which were left and drove away the women and the cattle. Even in 1847 Edwardes says that every two or three years the Sikh army harried the fields of the Bannu people, trod down their harvests, burnt their houses, and inflicted injuries which it took years to repair.

In most parts of the Peshawur district the land taxes were collected by the periodical dispatch of Brigades. The British took over the frontier in 1849, and no less than fifty-six military expeditions were necessary to establish order after that date.[2]

For fifteen hundred miles along the base of the hills from which the invaders came there stretched an uncultivated borderland, from twenty to fifty miles in breadth, that yielded no food for man because no one dared to cultivate it. It teemed with wild animals which ravaged the herds and hamlets of the open country. To marauding man was added the terror of the tiger and the elephant. We get reports of forty and another of fifty-six villages destroyed by wild elephants.[3] As late as 1872 it was officially stated that in the previous year 18,078 deaths had been caused by dangerous animals. The chief commissioner of the Central Provinces reported the following number of deaths from tigers: in 1866–7 372, 1867–8 289, 1868–9 285; total for three years, 946. A single tigress was said to have destroyed 13 villages. In Lower Bengal alone in a period of six years 13,401 people were killed by wild beasts.[4] If matters were as bad as this with English officials only too anxious to shoot tigers, what must it have been in the days of the almost defenceless

[1] Hunter, *India of the Queen*, p. 102.

[2] Quoted from Merk, "North-West Frontier Province": *J.R. Soc. Arts*, 2nd June, 1911, p. 757.

[3] Hunter, op. cit., p. 44.

[4] *Report on Moral and Material Progress of India*, 1872–3, p. 130. Other instances were "wild beasts frequently obstruct government survey parties". "In 1869 one tigress killed 127 people and stopped a public road for many weeks." "One man-eating tiger is said to have destroyed 100 people."

villagers with their bows and arrows, and their disinclination to take life?

It was more difficult for an army to cross waste tracts as the soldiers could not live on the country. Hence the system of defence involved a frontier of waste land. "The unsettled frontier of the last century meant that sixty thousand square miles of borderland (double the whole area of Scotland) were abandoned to jungle and the wild beasts, not because there were no people to cultivate the soil, but because they did not dare to do so. It signified that tracts which might have yielded, and which will yet yield, thirty millions sterling worth of food each year lay untilled through terror of the turbulent hill races." [1]

The inhabitants of the sea coast did not fare any better. The pirates of the Bay of Bengal sailed up the great rivers, burning the villages, massacring or carrying off the inhabitants into slavery. A thousand square miles of seaboard now a populous tract was bare of villages, and the first English surveyor in the second half of the eighteenth century wrote on his map "Depopulated by sea robbers".[2]

When the British took over Assam in 1826 "thirty thousand Assamese had been carried off by the Burmese as slaves when they retired down the Assam valley". Many thousands had lost their lives and "the remnant of the people had almost given up cultivation, supporting themselves on jungle roots and plants. The nobility and priestly families had retired to Goalpara, or other refuges in British territory, often after losing all their property, and with them came crowds of dependents, glad to escape from the miseries of their native land".[3]

To enemies from outside or from the hills and to the Mahrattas were added military adventurers and ex-officials of the old Moghul Empire who scrambled for kingdoms and plunder. The troops lived by open pillage. The Rajputs were only saved by the English from extinction by the Mahrattas, and the necessity of keeping internal order meant that the first half of the nineteenth century witnessed a constant series of punitive expeditions by the English, followed often by annexation.

The population in the prevailing insecurity often took

[1] Hunter, op. cit., p. 105.
[2] Op. cit., p. 103.
[3] Sir Charles Lyall, *Assam*, quoting Mackenzie, "North-Eastern Frontier," p. 7. *J.R. Soc. Arts*, 1903, p. 623.

to dacoity, i.e. armed robbery by bands. Husbandmen who were robbed became bandits in their turn. In 1772 the Council reported that organized bands of robbers were burning, plundering, and ravaging the interior of Bengal in bodies of fifty thousand men.[1] There were over a hundred hereditary predatory castes, the members of which gained their living from generation to generation by plunder. The dacoits were reinforced by thugs, who strangled merchants, pilgrims and others as professional murderers. As Montesquieu said, in 1748, there were only the wretches who pillaged and the wretches who were pillaged.

Although for seven hundred years India had been subject to invasion, matters seemed to have reached their climax just before the British began to rule in the latter half of the eighteenth century. "It was," as Sir A. Lyall has said, "a mere tearing and rending of the prostrate carcass, a free fight with little definite aim or purpose beyond plunder or annexation of land revenue." [2]

The result was that capital accumulation was impeded, the habit of thrift was lost, the Indian did not develop the idea of investment when there was no security and money gained was either spent extravagantly in a ceremony, generally a marriage, or was hoarded. A habit of listless working was engendered. Why should a man sow when he may never reap, or when the profits will be taken from him? The commonest remark from Lord Dalhousie's famous minute on railways in 1853 to writers in the twentieth century, is that the Indian has little or no initiative. A man is not likely to have developed great initiative under a long series of nature's catastrophies and man's devastations.[3] So marked a contrast exists to-day between the amount of English capital and English direction in Bengal

[1] Hunter, p. 106.

[2] Asiatic studies.

[3] The undeniable poverty of India is not due to her administrative system but to the fact that she is not at present organized for the production of wealth. On every side tradition and sentiment rather than economic advantage rule to-day as they have ruled for centuries and exercise upon the Indian masses a cumulative pressure as universally crushing as it is commonly unrecognized. The Indian peasant inherits little from his forbears but land already impoverished or at least unenriched by the culture of generations. He has nothing of the immense wealth which in Europe has been handed down to present-day agriculturists in the form of reclamations and working capital. *Moral and Material Progress, Cmd.* 1961, p. 199.

and the large part taken by Mohammedans, Parsees, and Hindus in the trade of Bombay, that it is not fanciful to ascribe this to the fact that while the constant invasions of the Ganges' valley gave no security and therefore tempted no enterprise, the traders of the West coast were relatively safe, and under English and Dutch rule entered into partnership with the foreigners.

The general result was that the population either dwindled or did not increase, and the land needed tenants. The landed proprietors were anxious to get them, and at the beginning of the nineteenth century their treatment was relatively favourable. Slaves too were valuable to cultivate the waste lands, and this gave considerable impetus to the internal slave trade.

The task of the English when they assumed control was, according to Macauley, " to reconstruct a decomposed society." Above all it had to try and protect the peasant and raise his standard of life. The British took over India in a state of economic nakedness. There were no metalled roads, docks, harbours, canals, hospitals, schools, colleges, printing presses, or other requirements of civilized life, and neither the disposition nor the means on the part of the population to provide them. The canals had dried up and enormous areas of land were sheer waste. British rule had to play the part of a universal provider and special providence, and India is the great example of what a Government can effect in raising the economic standard of a country.

Modern security means modern taxation. The English with armies and navies and easy communications had given this security, which is the basis of all economic progress and the first essential for India. But it had to be paid for. The difficulty has been to get a European standard of administrative efficiency out of a people with little or no margin to pay taxes. Finance is the crux. The cultivator will own that peace and order are eminently desirable, but he is a poor man with a tiny surplus. If a European standard is to be maintained it means either an extra tax on salt or sugar, or it must come out of the big source of revenue, the land tax, or out of the customs and probably out of all of them. The special difficulty in India is that while the taxable capacity is so low, the surplus may vanish before a famine like snow before sunshine, and the budget is always a " gamble in rain ". If the monsoon fails,

not merely has the land tax to be remitted but expensive relief works have to be set up, the railways get less to carry, and the Government has to make up the deficit where it has guaranteed the interest. The absence of rain or other unfavourable weather may destroy a large part of the export trade which consists of raw cotton, rice, food grains, and oil seeds; the purchasing power of the people is thereby lowered, and they cannot buy manufactured goods—the main imports; the customs suffer accordingly, and the deficit in revenue does not occur only in the remissions of the land tax. Further, to ensure security and prosperity, great public works have to be undertaken, loans raised, and money or goods remitted to pay the interest on these loans as the Indian people have not hitherto been able or willing to provide the capital.

The very security has, however, led to a rapid increase of population, the occupying of the vacant land, the resort to less fertile soils, and the subdivision of arable holdings into uneconomic scraps. Although the evidence would seem to point to an increase in the standard of general economic well-being,[1] yet the very removal of the Malthusian checks to population has tended to prevent that marked rise in prosperity which protection of life and property should have ensured.

Another effect of the security and justice set up by the English is to increase the value of the land. "The life had been trodden out of the village organization by the heel of the Mussulman tax-gatherer and the hoof of the Mahratta cavalry." There was so much waste land that in 1789 the Governor reported that one-third of Bengal lay waste. Landed property formerly the most insecure form of property, became the most secure, the increase of population filled up the waste land, there was a scramble for land and not for tenants.[2] The village banker now lent

[1] "So far as ordinary tests can be applied, the average Indian landholder, trader, ryot, or handicraftsman is better off than he was fifty years ago. He consumes more salt, more sugar, more tobacco, and far more imported luxuries and conveniences than he did a generation back. Where house-to-house inquiries have been made, it has been found that the average villager eats more food and has a better house than his father, that to a considerable extent brass or other metal vessels have taken the place of the coarse earthenware vessels of earlier times, and that his family possess more clothes than formerly." *Results of Indian Administration in the past fifty years, Cd.* 4956, 1909, p. 26.

[2] "Parts of the Central Provinces still bear traces in their scanty population of the Maratta and Pindari raids during the early part of last century." Between 1901–11 it was the most sparsely inhabited tracts

large sums of money on land, for his security was now good, as the demand for land increased. The competition for land became so great by the 'eighties that if the cultivator were sold up someone else was always willing to buy, and as the English judicial system enforced contracts the indebted peasant had to go. Thus insecurity of tenure through pillage was replaced by insecurity of tenure through debt.

A further result is that there has been a tendency to raise rents and to rack rent tenants. Thus the South revolts against the money-lender, and the North against the landlord.

While, therefore, the old insecurity was ruinous to economic development, modern security demands a taxation which, though not so heavy as that of the old Emperors, may yet be regarded by a generation used to security as too heavy a burden. And the tradition of being squeezed to the uttermost limit makes the average cultivator sure that he is being so squeezed at the present time.[1] The disproportionate wealth of the rulers of past centuries also makes for a rooted belief that the Government really has enormous sources of wealth which it could use if it chose. Hence it is easy to use taxation as a leverage of discontent, especially when it is an alien power that levies the taxes.

The problem is how to maintain a modern system out of an Asiatic revenue. How can a poverty-stricken people pay enough to ensure honesty of administration?[2] Throughout the century the Indian revenue has been practically the crux of the economic history of India. The strain was partially solved by the great wealth-creating

that were adding most rapidly to the number of their inhabitants . . . the reasons being that anarchy has disappeared from Burma; the remote tracts of the Central Provinces and Chota Nagpur have been made accessible by rail, and the irrigation works of the Punjab. Gait, "Indian Census," 1911, *J.R. Soc. Arts*, p. 628.

[1] India at this moment possesses the cheapest administration of any civilized country. *Moral and Material Progress*, 1923, p. 198.

[2] "It is easy to govern efficiently at cost of 40*s.* per head as in England, but the problem in India is how to attain the same standard at 3*s.* 8*d.* a head. Every year the Indian finance minister has to provide for more schools, more police, more courts, more hospitals, more roads, more railways, more canals." "No Moghul Emperor ever mapped out India for judicial purposes, the law officers merely sold decisions. The police were an undisciplined half-starved soldiery who lived on the people." Hunter, *India of the Queen*. The army was provided by feudal unpaid levies and the tanks and canals were built by forced labour. Hence there was a labour tax.

power of the railways, while the situation was always being complicated by the increasing number of the people and the inability of the land to support them at a higher standard. And as the British Government played economic Providence, it usually got the blame both for omissions for which it had not the revenue and for commissions which were said to be too costly. When the money was raised by loans from the people of England there was a complaint about the " drain " to pay the interest. Something for nothing is not to be obtained by India any more than by any other part of the world, and yet that is what the English are always being asked to produce in India.

While the English could and did give security against invaders, internal troubles, pirates and wild animals, there was far greater difficulty about the second great cause of uncertainty, namely the weather, especially the failure of the rains.

There are months at a time when there is no rain, i.e. from January to April. By June, India is scorched into a desert. For three or four months when the Indian world in the plains is waiting for rain " the pitiless sun has been beating down on the land, turning it all to a monotonous brown—scorching, cracking, pulverizing. The hot wind like a blaze has been whirling the dust into every wrinkle and crevice. Outside every stone is too hot to touch ; inside the tent, or house, even the chairs and tables covered with grit, feel to the hand like the floor of an oven. The mosquito has become a burden, and the cattle peering about in the withered fields for their daily food grow weaker and thinner. The whole of Nature gasps ".[1]

Then the monsoon breaks. It is supposed that the heated air rises and that the wet current is drawn in from the ocean. The monsoon embraces India with two arms ; one comes up the Bay of Bengal, where it is reinforced by local hurricanes, and it spreads deluges of rain over Eastern Bengal and further up the country. The other current going up the Bombay side is intercepted by the Ghats, with the result that the Deccan suffers from considerable uncertainty in the matter of crops, and on an average gets two good harvests out of five. With the lower sea walls of the Eastern Ghats the current can sweep inland more easily. But the monsoons vary in strength and incidence, and it is very rarely that all India gets a perfect monsoon.

[1] Sir F. Lely, *J.R. Soc. Arts*, 1907, p. 413.

The general result is a patchy rainfall. "For several months in every year India is on trial for her life, and she seldom escapes without a penalty." Even in a prosperous year India is not free from economic waste and wreckage of this sort on a tremendous but practically irreducible scale.[1] The rains are over by September, though some storms are expected in October and some winter rains fall in December. Madras gets its chief rainfall from the withdrawal of the monsoon in November and December. One set of crops is sown when the monsoon ends in October, viz. wheat, barley, and linseed, and is reaped from January to March. This is called the Rabi harvest. The other crops, such as rice and cotton, are sown in the spring, when the monsoon begins, and reaped in autumn—the Kharif harvest. The result is that there are two harvests a year, and the land revenue collection is based on this fact.

If the monsoon fails, there is "a lock-out in the agricultural industry". There may also be too much rain, and the silt of the Ganges valley is then washed away by floods, so that the crops cannot be sown. Too long rains bring out the hordes of insects which destroy vegetation, or the cold weather rain may produce blights. Locusts, and even rats, often produce local famines. In April great uncertainty arises from the hail-storms which often sweep away the fields of grain or stamp them flat.[2]

The alternation of the seasons does not merely affect man, it also affects his animals, which are essential to him for well-work, ploughing and transport, and without which the cultivator cannot live. The Hindu does not eat meat, therefore milk is an important supplement to his diet. Thus even in a famine almost as much effort has been made to save the animals as the human beings.

The effect of the alternations of the wet and dry seasons on the cattle, which are the mainstay of the cultivator's life, has been described as follows: "Over a great portion of the Empire, writes the Secretary of the late Agricultural Department in India, the mass of the cattle are starved for six weeks every year. The hot winds roar, every green

[1] *Round Table*, Dec., 1923, p. 95.

[2] "I have seen wheat extending over half a million acres which two months before promised a bumper crop yield at harvest time two or three pounds of shrivelled grain per acre . . . In crop diseases, as with diseases of mankind, India does things on a large scale." Bampfylde Fuller. In 1923 the rains were particularly devastating in Bengal. Villages lay under 20 feet of water, rivers rose as much as 70 feet at a time, railway embankments were swept away, and traffic was consequently diverted.

thing has disappeared, no hot weather forage is grown; the last year's fodder has generally been consumed in keeping the well bullocks on their legs during the irrigation of the spring crops; and all the husbandman can do is just to keep his poor brutes alive on the chopped leaves of the few trees and shrubs he has access to, the roots of grass and herbs that he digs out of the edges of fields and the like. In good years he just succeeds; in bad years the weakly ones die of starvation. But then comes the rains. Within a week, as though by magic, the burning sands are carpeted with herbage, the cattle will eat and overeat and millions die of one form or other of cattle disease springing out of this starvation, followed by sudden repletion with rank, juicy, immature herbage." [1] Sir W. Hunter calculated the loss at ten million beasts annually. Hence India has a considerable export trade in hides.

This terrible uncertainty of life due to the weather is the cause of the devastating famines to which India has been subject for past centuries, and is all the more appalling as the bulk of the Indian population depend upon the soil for their living.

"In the whole of India the soil supports 226 out of 315 millions, and 208 millions of them get their living directly by, or depend directly upon, the cultivation of their own or others' fields. What concerns them is mainly the rainfall or the irrigation supply from wells or canals, the price of grain and cloth, the payment of rent to the landlord or revenue to the State, the repayment of advances to the village banker, the observance of religious festivals, the education of their sons, the marriage of their daughters, their health, and that of their cattle. They visit the local town on bazaar days; and the subdivisional or district centre rarely on business or litigation . . . Of Parliament or even of the legislative councils they have never heard. In one province it is stated that 93 per cent of the people live and die in the place where they were born." [2]

[1] Quoted Hunter, *India of the Queen*, p. 158.

[2] *Montagu Chelmsford Report*, p. 111. This has been put in another way by an authority on the Indian Census (1911): "Of every hundred inhabitants of India seventy-two are supported by pasture and agriculture, eleven by industry, two by transport, and six by trade, and only nine in all other forms of occupation . . . The extremely primitive character of the functional distribution of India is shown by the fact that 90% of the people are engaged in twenty-six simple avocations commonly followed in every village." Gait, "Indian Census," *J.R. Soc. Arts*, vol. lx, p. 632.

Here, too, it has been the object of the English to bring security. The railways have enabled food to be distributed in times of famine, so that famine now means unemployment and general measures of relief, i.e. they are now work famines and not food famines. Writing of the seventeenth century, Mr. Moreland says that local dearths were frequent, while acute or widespread famines occurred sufficiently often to influence the calculations of merchants and producers.

The famine of 1630 was thus described by the Dutch senior merchant Van Twist: "Men deserted their wives and children. Women sold themselves as slaves. Mothers sold their children. Children deserted by their parents sold themselves. Some families took poison and so died together; others threw themselves into the rivers. Mothers and their children went to the river banks and drowned themselves hand in hand, so that the rivers flowed full of corpses. Some ate carrion flesh, others cut up the corpses of men and drew out the entrails to fill their bellies; yes, men lying in the street not yet dead were cut up by others, and men fed on living men so that even in the streets and still more on road journeys men ran great danger of being murdered and eaten." He describes the whole country as full of and polluted by unburied corpses. "Some of our Dutchmen coming from Ahmedabad found some people sitting at a little fire where hands and feet were cooking, a terrible thing to see. Even worse was it in the village of Susuntra where human flesh was sold in open market. This terrible divine punishment fell chiefly on the poor who had nothing in store." [1]

While the railways have changed the nature of the famines, irrigation works on a large scale and the promotion of better agricultural methods and seed have formed part of the attempt to provide a security of life unknown till the nineteenth century. The famines have, however, been a great stimulus to public works of all kinds in India, especially railways and canals. The vigorous Anglo-Saxon belief that man is master of his own fate sounds a mockery to people whose very existence depends every year at a certain season on the coming of a wind that bloweth where it listeth. Until the British Government came and took famine by the jaws there was nothing for the humbler and weaker Indian on a failure of rain but to sit down

[1] Quotations taken from Moreland, *Akbar to Aurangzeb*, p. 212.

and die, as he did every other year in one part of the country or another under native rule. It is little wonder if the cumulative effect of many such failures has been to diminish self-reliance and power of initiation.[1]

The climate is also responsible for a good deal of the "slackness" of the Indian peoples. One must, however, never forget the absolutely paralysing effect of malaria, not merely in deaths but in lowering the stamina of the workers. The influenza epidemic of 1918 wrought appalling havoc among an enfeebled people; approximately seven million people are said to have died from it.[2] Plague, too, is responsible for a high rate of mortality. Between 1901–11 the total recorded mortality from it during the decade in British territory was six and a half millions.[3] "Plague first broke out in the Punjab twelve years ago, and since then more than two million people have died of that disease. . . . Bad as plague has recently been, it is not so disastrous in its effects as fever, which we have always with us." In 1909 it was estimated "that a quarter of the whole population of the Punjab suffered from fever. It is in this respect that fever, and especially malarial fever, is more injurious than plague, though plague is more rapid in its course and much more fatal to those whom it attacks. Fever, on the other hand, in seasons in which it is prevalent, seizes far more than it kills, and generally after unusually heavy rains practically the whole population of large tracts of country is down with fever at one time, and it is impossible to carry on agricultural operations or even domestic work satisfactorily. Fields are left unploughed, unsown, and unweeded, and often it is difficult to find labour enough to reap the harvest." [4]

While the divided condition of India is partly due to invasions and partly to the structure of the country, its perpetuation is due very largely to religion and especially to the caste system which has a most important bearing on economic life. The caste system is the special characteristic of the Hindu population, who numbered 229½ millions in 1911.[5] The outlook of the average Hindu

[1] Sir F. Lely, "Famine in India," *J.R. Soc. Arts*, 1907, p. 413.
[2] *Indian Year Book*, 1923, p. 477.
[3] Gait, "Indian Census," *J.R. Soc. Arts*, lx, p. 505.
[4] Sir J. Wilson, "The Punjab," *J.R. Soc. Arts*, 1909, p. 150.
[5] This includes Buddhists and Jains 11,969,635. Hindus alone were 217,586,892 or 69%. With Jains and Buddhists 73% depended for spiritual sustenance on Hinduism and its offshoots.

is not material but religious. He is not possessed by the Western notion of rising in the world. His occupation in life is determined by his caste and many explanations of its origin exist. Whatever it may have been, two leading figures stood out in Indian history, the Brahmin or priest and the warrior king or Rajah. There was a priesthood fighting for ascendancy and a fighting leader. These two organized Indian life, and the peasant provided the means of their subsistence.

From the twelfth century, when the Mohammedans began to come in, there followed six centuries of conquest, rapine, and destruction, the Hindus were forced on to the defensive, and became intensely local, the country already made for disunity, and the Mohammedan conquerors were driven like islands or wedges in between the Hindu society. The rajah, Mohammedan or Hindu, ruled whatever territory he could seize and hold, and he and his Brahmin ruled the economic, political, and spiritual life of the people, their only duty was to obey and give services and payments in kind. The result was, to quote Lord Meston, that " the tyranny of the caste hardened, family life got more exclusive, and all reform in faith and doctrine was stifled ".[1] The caste system crystallized in opposition to Islam, and there was an " ossification " of the system. " There was forced into the Indian polity a foreign and incompatible element, the Mohammedan settlers, numerous and restless, fervent proselytizers, utterly incongruous with the Hindu system and contemptuous of political union." [2] There thus arose two warring religious camps.

Either because the mass of the population has been subject to so many alien rulers or because religion takes the place of nationality, the Indian citizen has hitherto felt no conception of the State as a whole. He does not realize that local government or the maintenance of order is a duty that he owes personally to the whole community. The Government seems to the mass of the Indian peoples to be a mysterious organization outside themselves, which owes them certain duties and to which they pay certain dues. They have no idea of co-operating with it as yet. They are too local in spirit.

The castes became so rigid as a consequence of the invasions that a man's occupation is determined by the

[1] Meston, *India at the Crossways*, p. 17.
[2] Ib., p. 17.

caste into which he is born, he cannot eat with any other caste, and he cannot marry outside the caste, and only for a few purposes can he associate with other castes.

The economic effects of the caste system have made for that isolation, non-co-operation and a very narrow circle of interests which is detrimental to economic progress. It produces, however, hereditary professional skill and does provide a technical training, but there is no choice, no change, or possibility of rising in the world out of the caste. It has the advantage, however, of being a sort of mutual insurance, which is probably a strong reason for its survival. The result is that there has been no poor law necessary in India. The caste fellows would help each other in the invasions and famines, and the family system ensures the support of the aged. India is the "Land of Charity". Caste distinctions do, however, stir up bitter rivalry and feuds between castes to which the religious antagonisms between Hindus and Mohammedans also contribute. It has been in the past impossible for all the children of one village to go to the same school and sit in the same room. There is, however, a large class of outcasts or untouchables, comprising about a fifth of the entire population. "They may not draw out water from public wells; they may not enter the houses of people belonging to the touchable classes; in some provinces they may not even use the public streets. They are denied the use of temples and inns; their children are not customarily admitted into the ordinary schools, and when admitted are made to sit apart from others, who would be polluted by their mere touch. These disabilities, although primarily social, extend to the minutest operations of daily life, so that a labourer or agriculturist belonging to the depressed classes is constantly a loser in ordinary commercial operations through his inability to enter a shop or even to pass through streets where shopkeepers dwell. Social ostracism, so degrading, persisting through immemorial centuries, has naturally constituted a most serious obstacle to manliness, independence, and capacity for self-help." [1] The depressed classes can eat anything, and may turn their hand to any occupation. They can move and emigrate and these people provide the bulk of the unskilled labour. The improving economic position of labour during and

[1] *Moral and Material Progress*, 1923, p. 222.

since the war has changed the outlook of these classes, and there is an organized assertion of the depressed classes.[1] But it is a sign of their rise in the world if they can form themselves into castes and become exclusive in their turn, and so the tendency to form castes goes on for social reasons. Another disadvantage of the caste system is that it makes for in-breeding since marriages cannot take place outside the caste.

Religion to the Hindu not merely limits his economic activities through the caste. It has other economic effects. Girls must be married early. Marriage is a religious duty and a son a necessity. Failing heirs of the body, adoption is recognized by law. The result of these early marriages is immature and feeble children, and the general prevalence of marriage leads to an increase of population always pressing on the means of subsistence and preventing a marked rise in the standard of living.

Another factor which has hampered economic development has arisen out of the practice of child marriage. The ambition of the parents is that the girl should marry above her within the caste, and in order to secure this a great deal of money is spent both on securing the son-in-law and on the marriage ceremonies, all of which puts the peasant into the hands of the moneylender. This typical unproductive expenditure has the effect of transferring much of the surplus profit of the land which ought to go into the soil in the shape of manures or other improvements, into the hands of the usurer, as he supplies a large part of the money for the marriage.[2] Indeed, in the Punjab the alienation of land from agricultural to non-agricultural classes (e.g. moneylenders) was prohibited by law in 1900.

Orthodox Hindus are vegetarians, though in the rice provinces they may eat fish. The cow is the peculiar object of veneration, and no Hindu may therefore kill a cow or use her for any purpose except milk. Thus the only economically useful thing about a cow when she ceases to give milk is the horns, hides, and bones when she is

[1] Ib., pp. 222–3.

[2] "An analysis of working-class budgets in Bombay showed that where an average family income was Rs. 52–6 per month, the average cost of a marriage was Rs. 214, of a funeral Rs. 35, and a festival Rs. 18. In no less than 14% of these Bombay families the expenditure on marriages alone represented more than the family income for the year. In 23% it amounted to more than one-half the total annual income and in 73% to something under one-half." *Moral and Material Progress*, 1923, p. 200.

dead. The meat has no value. A special untouchable caste of Chamars or hide dressers deals with the carcass. Thus a great source of food supply is wasted as the meat is not eaten and the old cow uses up the fodder that might be kept for good animals. The bones are not even used as manure, and so they have been largely exported. It is even impious to kill a bull, and therefore there is a great amount of indiscriminate breeding, which tends to produce poor stock even from a milking point of view.

The Brahmin and Rajput are contaminated if they touch the plough, and so, if landowners, they are bound to sublet to tenants. Some castes cannot touch manure, and it is often wasted on that account.

The higher castes are connected with land-owning. The lower castes are the artisans. The weaver of the village was a low caste man, and the chamar or skinner still lower. There was, therefore, a certain degradation attached to industrial work, and persons of repute would hold on to land to the last gasp. "A religious mendicant excites far more respect than an efficient artisan."[1] This has held back industrial development and partly accounts for the scarcity of hands for factories and mines and for the fact that when obtained they are so largely migratory and return to the land. To acquire a standing the Indian aims either at the possession of land or a clerical, administrative, or teaching post. Hence the lack of Indian foremen and Indian engineers, and the necessity of paying foreigners.

A great deal of the poverty of India is due to the fact that consumers increase at the expense of producers. Among the Mohammedans the woman is purdah, i.e. she is veiled and segregated. She is, therefore, unable to become a producer.

The general effect of Hinduism is that the outlook on life is not economic. Whereas the ambition of the man in the West is to acquire comfort and amusement, that of the East is to acquire dignity and leisure. In the East dignity "can be enhanced by expensive display, but the display takes the more primitive form of generosity to others shown either by hospitably entertaining caste fellows or by maintaining a host of dependents. The larger is a man's household, the greater is his repute".[2] The

[1] *Moral and Material Progress*, 1923, p. 200.
[2] Sir Bampfylde Fuller, *Studies in Indian Life and Sentiment.*

religious outlook on life is to attain " merit ", very often by indiscriminate charity or by self-abnegation. This gives rise to a horde of beggars. If a man gets on in the world he gathers innumerable relations and hangers-on, he gets very little material benefit himself, but presumably gets satisfaction out of the respectful salutations of his dependents. There is, therefore, little individual responsibility and little incentive to get on since the proceeds enrich others.

The system of the " joint family ", by which several generations live together in patriarchal fashion and support each other, and in which the earnings of anyone goes into the general fund, though it does provide an insurance for the whole, does not encourage special effort. On the other hand, if one son through poverty goes to the factory, the joint family " carries on " and does the work in his absence, and he can easily return and fit into the system again. But his earnings also go to support the joint family. It is remarkable how well coolies who have emigrated get on in the world when they are free of caste restrictions and the joint family obligations in such places as Trinidad or Fiji.[1]

In times of stress the Indian cultivator looks to the Government for help, it is his " father and mother " and " the protector of the poor ". Self-help is little understood. Group help or Government help is typical.

In the same way Mohammedanism, being a fatalist religion, discourages individual initiative. All happens as ordained, why kick against the pricks? The British regard themselves as co-operating with a Providence that works with them and through them, and they fight circumstances to modify them. The Hindu and Mohammedan accept circumstances as the unalterable will of an outside power. The result is that India, economically speaking, is a country of " the second best ". There is no motive for striving.

" The first thing to remember about India is that the country is poor, partly because it has to support a population which is pressing so constantly up to the margin of its resources that every adverse circumstance drives back a certain number below the level of subsistence; and partly because the customary standards of life have scarcely changed since history began, so that poverty is patiently

[1] Keatinge, *Agricultural Progress in the Bombay Presidency.*

accepted not merely as a necessary evil but as a natural state to which no alternative is known or sought." [1]

The Hindu is born into a caste, only by birth can a man become a Hindu. The Mohammedan is, however, a proselytizer and does not recognize castes in theory, but many Mohammedans, who are often the descendants of converted Hindus—are almost as much infected by caste prejudices as the Hindu, and as we have seen the pariahs are always creating castes of their own.[2] The effect of this caste system is to perpetuate the divisions of India, the effect of the railways, where the different castes have to enter the same carriage, and where a Sudra has the same right to as good a seat as the Brahmin, and the effect of the factories, where they are inevitably mixed, is to break them up. But the creation of new castes goes on and the actual weakening of the caste system is not very perceptible as yet, and though some observers consider that it is being undermined by education and modern industrial practices, others can see little change.

"The effect of this permanent maintenance of human types is that the population is heterogeneous to an extent that it needs actual experience to appreciate. It is no question of rich and poor, of town and country, of employer and employed; the differences lie far deeper. The population of a district or a town is a collection of different nationalities—almost different species of mankind that will not eat or drink or intermarry with one another . . . It is hardly too much to say that by the caste system the inhabitants of India are differentiated into two thousand species of mankind, which in the physical relations of life have as little in common as the inmates of a zoological garden." [3]

[1] *Round Table*, 19th December, 1923, p. 96. "Diseases are still generally attributed to the visitation of higher powers; and when sickness occurs the Indian prefers to take steps to propitiate offended deities rather than to disinfect his water supply and to prevent the contamination of his food." *Moral and Material Progress*, 1923, p. 218.

[2] The number of the adherents of the various religions were in 1911 :—

Hindus . .	217,500,000
Buddhists . .	10,700,000
Christians . .	3,800,000
Jains . .	11,200,000
Moslems . .	66,700,000
Animists . .	10,200,000

There is scarcely any community in India which has not been more or less affected by the caste spirit.

[3] Sir B. Fuller, *Studies*, p. 41.

Thus, when the English became the ruling power in India there was no national life, and the castes made for a static economic condition. Agriculture at the beginning of the nineteenth century was organized on the basis of the self-sufficing village, and its self-sufficiency has only been gradually affected in regions outside the radius of the bigger towns.

Sir Theodore Morison, writing on the Industrial Organization of an Indian Province, in 1906, says: "Almost every village possesses a blacksmith, a carpenter, a potter, a barber, and a washerman, and most villages retain the services of some sort of holy man whose blessing upon the fields is necessary for a successful harvest. In larger villages there will be found a weaver, a cotton carder, an oil man (who manufactures oil from seeds), perhaps a petty jeweller and a small shopkeeper . . . The grinding of corn and the spinning of thread are almost universally performed at home."[1] He quotes the following description from an inquiry into the economic condition of the agricultural and labouring classes in the North-West Provinces and Oudh in 1888. The description will show the division of the village grain heap and payments in kind, i.e. a natural and not a money economy.

"When the grain is threshed, the artisans and menials get their perquisites. The man who does blacksmith's and carpenter's work gets in this way twenty-five seers of grain per plough at each harvest, this being given in barley mixed with grain or peas at the spring, and maize or gur or millet at the autumn harvest. The chamar (leather curer) in consideration of repairing the well water bag, providing leather straps and whips, and helping clean the grain similarly gets twenty seers at each harvest per plough. The washerman gets the same. Many give the same amount of grain to the *Kahar* or *Bhisti* who keeps their houses supplied with water during the year, but among the lower classes of cultivators or field labourers the women of the family have to do this work themselves. Similarly the potter, in consideration of providing earthen pots during the year, gets ten seers of grain per plough per harvest. The local priest who lights the *Holi* fire and looks after the village ghosts gets $2\frac{1}{2}$ seers per plough at each harvest. So, too, beggars and the wandering *faquir* or *jogi* in whose round the villages lie, get a handful or two according to the

[1] p. 177.

piety or generosity of the owner. The light grain and sweepings of the threshing floor are the chamar's privilege in consideration of the help he gives in threshing and winnowing. The meat of dead cattle also falls to him, but he does not get the skin. If an animal dies, the hide goes to the owner, and the chamar expects 10 or 12 seers of course as a fee for curing it. In some cases he is expected to mend shoes for nothing. This is much better than the rule in the eastern districts where the chamar can claim the hide and has thus a direct incentive to poison the cattle." [1]

It follows from this that the industrial development could not be large because there was no division of labour. The mass of the labouring classes in India were men who worked on their own account, and not as wage-earners for an employer, and during the nineteenth century the bulk of them remained in this position. But as the century advanced the village artisans have been drawn on more and more to execute the public works and to retain them the village remuneration has had to go up by leaps and bounds.

One result of the great poverty of the Indian masses in the past is that the only market worth catering for was that of the Courts. Indeed, the places where the Courts held camp were the towns of their day, and the artisans were gathered round them to carry out the manufacture of articles of luxury and repair and make arms and so on.

There was in India no real market outside these centres, lack of communications prevented the rise of distributing agencies or middle men and the surplus village production was too small to make it worth while to organize a collection of such goods. A village had to be self-sufficing, and there was an almost complete absence of trade except at a few accessible points on the coast and rivers. Even to-day the difficulty of reaching the masses is deterrent to the development of manufacturing in India, and the goods that are sold pass through the hands of an undue proportion of middlemen.[2]

The effect of the self-sufficiency of the village has been that men had little or no chance of learning about new

[1] *An Inquiry into the Economic Condition of the Agricultural and Labouring Classes in the North-West Provinces and Oudh*, 1888, pp. 24-5, quoted Morison, p. 179.

[2] See p. 225, quoting *Industrial Commission.*

methods of production, new mechanical appliances, new varieties of grain or cotton. The peasant had "no opportunity of finding out what devices for lifting water or crushing sugar cane have been invented or what degree of success they have achieved . . . The hand weaver is in the same position, he has no opportunity of learning of the mechanical improvements by which the efficiency of his loom could be enormously increased, and he continues to ply his craft in the fatiguing and ineffective fashion which his predecessors followed a thousand years ago." [1]

During the past century this isolation though not broken down has been broken into to a considerable extent.

There has been first and foremost the tremendous fact of the railways, which have led to a great movement of people. The Indian population has taken very kindly to railway travel, and one of the most paying items of the railway budget is the money derived from pilgrims.

The isolation has also been broken into by the increase of population and the need for the extension of cultivation. Thus great canal colonies have been created in the Punjab, and hundreds of thousands of people have migrated or been helped to move to fill them.

The need of Indian coolies as labourers on the tea plantations of Assam led to their importation from other parts of India. Bengal with its jute mills, tea gardens, and coal mines, has received nearly two million immigrants from other provinces, while the United Provinces sends out 800,000 of its people to earn a livelihood elsewhere . . . In Assam the immigrants, of whom two-fifths of a million are from Chota Nagpur, are attracted by the tea gardens, while in Burma they go chiefly to work in the rice mills and oil works, or as agricultural labourers; a quarter of a million are natives of Madras and an eighth of a million come from East Bengal. Throughout India the larger towns are great centres of attraction, and in Calcutta and Bombay about three-quarters of the inhabitants are immigrants.[2] The recruitment of labourers for Ceylon, Malaya, the West Indies, and Africa has led to considerable transplantation of the population. The demand of the public works also tended to break up the isolation of the villages by their demand for labour for construction.

[1] Morison, op. cit., p. 6.
[2] Gait, op. cit., p. 628.

The relief works undertaken at the time of the famines also led to the drawing of people out of the villages with consequent infiltration of new ideas. The demand for such special commercial crops as indigo, cotton, rice, and tea has led to an organization of the growth, collection, transport of the products, and a corresponding exchange as against food grains, oil, tea, and sugar. This tends to break up the self-sufficing nature of the village as it must sell to buy and buy to live. One of the reasons for the great absorption of coin by India is that she is replacing a natural economy by money payments.

Hundreds of thousands were required to build the railways. Coolies, as we have already seen, could no longer be kept in a semi-servile condition when the railways offered good terms and alternative employment. More than seven hundred thousand Indians are regularly employed on the railways.[1] The railways also needed coal and persons like the Kamiya of Behar, who had been practically serfs bound to the soil, left their employment and went into mines. In many cases this led to attempts to recover them by violence.[2]

The industrial development and the great demand for "hands" led to recruiting that went far afield. Labourers for Bengal were recruited in the Northern Circars or in the North-West Provinces. About 90 per cent of them were imported from places outside Bengal in 1918, and for the Bombay Mills they come from the Deccan and Central India. As the labourers do not stay long but return to the land, there is a constant infiltration of new ideas from this change of employment. Two million persons only out of 319 millions may be employed in the factories, mines and other workshops, but the constant substitution makes the actual numbers affected much larger.

In judging Indian labour one must remember the difficulties of training a mediæval agricultural people. How primitive are the conditions into which a modern factory system is being introduced may be seen from the following description. "When mines are recruited with untrained and untutored huntsmen who arrive at the pit-head with their bows and arrows slung across their backs; when cotton mill operatives are townsmen only for the

[1] In 1922, 735,789 Indians, 11,831 Anglo-Indians, 6,858 Europeans.

[2] Dr. Saise informs me that the last case of an attempt to recover a Kamiya "with violence" within his knowledge was 1898.

time being, and are perpetually hankering after their ancestral plot to which they will return in due season to cultivate the land ; when labour is either in the highest degree migratory and fluid so that for example it can be an accepted practice to send railwaymen back to their homes on four months' leave without pay, or else confined by custom and heredity within the rigid moulds of caste, so that a water carrier is not a water carrier by choice or for a while, but by descent and for the whole of his natural life, it becomes meaningless to speak of labour in terms of a system which works through negotiations, committees, trade unions, and shop stewards." [1]

The attempt to introduce better agricultural methods has also led to a great movement to reach the people in the villages. The distribution of seed, the peripatetic engineers who bore wells, and even erect gasolene engines to work them, the promotion of co-operative societies, all these are acting as solvents of isolation and promoters of economic unity.

Before the days of the English there were no industrial or commercial towns, the industrial population outside the villages collected round Courts or camps and towns rose, fell, and decayed like the kingdoms. It was the English who founded Cawnpore, Bombay, Madras, and Calcutta. The rise of great towns on a more permanent basis and especially of the great seaports has attracted a town population. As they must be fed and as they must trade to live, the actual breakdown of isolation within a twenty-mile radius of a big town is striking, and leads many observers who do not know the country districts to think that the transition from isolation to exchange is even more rapid than it is. As railways, relief works, and industrial undertakings on a large scale only began in the last half of the nineteenth century, and as it took a generation for their effects to tell, one can only reckon the solvent, as acting effectively in the last thirty years, when the change is marked. But in that period there has emerged a national India, and for good or for evil India has become part of the modern world, feeling the effect of variations in prices all over the world and growing its crops for sale in the international markets. Cultivation for subsistence is being gradually given up, the old self-

[1] *Round Table*, Dec., 1923, p. 100.

sufficing existence is being rapidly undermined. Prices which formerly varied enormously from region to region are now equalized, and the lives of the humblest peasants are affected by the rise or fall in the value of the rupee.

At the beginning of the nineteenth century one must picture India as consisting of long chains of isolated self-sufficing villages. The roadless state was encouraged to prevent invasions. There were practically no money payments outside the towns, except for taxes, artisans being remunerated in kind. The country then, as now, was agricultural. There was no wage paid labour and no labour market.

During the eighteenth century the English had bought cottons and white calicoes for export either to Europe or to the Far East, West Africa, and the American plantations. The weavers were so poor that the Company had to advance them the money for their living, and also give them the yarn with which to work. There was considerable difficulty in eventually getting the cotton piece goods against which the money had been advanced and the yarn provided. The result was that a good deal of supervision was necessary, and this gave rise no doubt to sweating and extortion by the middlemen or supervisors. The cloth obtained was very unequal in quality,[1] and the famines and internal troubles interrupted the supplies. When an alternative and cheap supply of regular quality was obtainable from British factories without the need for all the complicated system of advances and supervision, the factory piece goods began to oust the Indian piece goods. The import instead of the export of piece goods was a new feature of the trade of the early nineteenth century. Arkwright's water frame came into use in England from 1770, and the power loom for cotton weaving was largely adopted after 1815. As the English cotton manufacturers expanded, the machine-made piece goods were exported to India and the Far East, and took the place of the export of cotton piece goods which had been the mainstay of the Indian export trade.

An attempt had been made by the East India Company to introduce silk goods into Europe from Bengal, and a certain export of raw silk and silk piece goods was promoted.

The company brought over planters from the West Indies, where indigo had been grown, to develop indigo

[1] The same trouble with home-made woollen cloth, viz. the inequality of the products, was also characteristic of the English hand-loom weaver.

planting in Bengal. To start the industry they advanced nearly a million sterling. There was a special demand for indigo at this period as the French revolution, having freed the negroes, had destroyed the indigo plantations in the French colonies. The rapid expansion of the cotton industry in England and the adoption by the Navy of dark blue for its uniforms gave rise to an unprecedented demand for dyes, especially for indigo, which was being met from India.

The luxury manufactures for the Courts dwindled with their eclipse. The conditions under which the artisans had worked for this trade in the middle of the seventeenth century, according to Bernier, does not make one regret the disappearance of these conditions.

"It should not be inferred that the workman is held in esteem or arrives at a state of independence. Nothing but sheer necessity or blows of a cudgel keeps him employed; he never can become rich, and he feels it no trifling matter if he have the means of satisfying the cravings of hunger and covering his body with the coarsest garment. If money be gained it does not in any measure go into his pocket but only serves to increase the wealth of the merchant." [1] This state of affairs seems to have been little altered by the eighteenth century. The Abbé Dubois wrote "As soon as it is known that an artist of great skill exists in any district he is immediately carried off to the palace of the ruler, where he is shut up for life and compelled to toil without remission and with little recompense".

There was a considerable local ship-building industry for the coasting trade. The profits of the East India Company, which was still a monopoly up to 1813, was partly derived from its trade as an intermediary in the Far East as well as from the trade between the East Indies and Europe. Spices, including cinnamon, cloves, nutmegs, mace, and pepper were still brought home, also indigo, saltpetre, and raw silk. The courts also continued to take a certain amount of imported luxury goods. The fundamental change by which England was going to supply a large part of the cotton goods worn by the wealthier classes, and by which India was going to supply vast quantities of raw materials and foodstuffs was as yet unforseen in 1813. The great demand in India for

[1] Moreland, *Akbar to Aurangzeb*.

engineering equipment and hardware was also fifty years' ahead, as was also the decline of the wooden ship-building industry before the greater efficiency of the iron steamer. The volume of the trade has increased enormously, and its character has completely altered during the past century.

At the beginning of the nineteenth century, even under the English peace, internal trade was hindered by tolls at market places, tolls on the roads and tolls between states.

And into this " decomposed society " based on religions actively opposed, with a rigid caste exclusiveness practised by the majority of the people, i.e. the Hindus, came the most energetic, individualistic, and at the time the most technically capable people in the world. They have started changes which are taking India over, economically speaking, from the fifteenth to the twentieth century, they have created an economic unity which will initiate a national Indian unity instead of the political unity of the bureaucratic, honest, and efficient rule of foreigners. It is typical of the responsibility England has felt for India that the annual report on that country should have been called a report on the Moral and Material Progress of India.

Sir W. Hunter, in a lecture given in 1880, imagines what a Hindu of the eighteenth century would think if he revisited India at that date.[1]

" I have supposed that his first surprise at the outward physical changes had subsided, that he had got accustomed to the fact that thousands of square miles of jungle which in his time were inhabited only by wild beasts have been turned into fertile crop lands, that fever smitten swamps have been covered with healthy, well-drained cities ; that the mountain walls which shut off the interior of India from the seaports, have been pierced by roads and scaled by railways ; that the great rivers which formed the barriers between provinces and desolated the country with their floods have now been controlled to the uses of man, spanned by bridges, and tapped by canals. But what would strike him as more surprising than these outward changes is the security of the people. In provinces where every man from the prince to the peasant, a hundred years ago, went armed, he would look round in vain for matchlock or a sword. He would find the multitudinous native states of India, which he remembered in

[1] *India of the Queen*, p. 98.

jealous isolation broken only by merciless wars, now trading quietly with each other, bound together by railways and roads, by the post and the telegraph . . . He would see the country dotted with imposing edifices in a strange foreign architecture of which he could not guess the uses. He would ask what wealthy prince had reared for himself that spacious palace? He would be answered that the building was no pleasure house for the rich, but a hospital for the poor. He would inquire, in honour of what new deity is this splendid shrine? He would be told that it was no new temple to the gods, but a school for the people. Instead of bristling fortresses, he would see courts of justice; in place of a Mohammedan general in charge of each district, he would find an English magistrate; instead of a swarming soldiery, he would discover a police." [1]

[1] Cf. also a speech in the Imperial Council Chamber by Sir Dinshaw Wacha, quoted Lovett, *Indian Nationalism*, p. 110. "What was justice in the time of the Moghuls? What was justice in the time of the Mahrattas? I appeal to my countrymen never to forget when we talk of law and justice that we are indebted to Englishmen for these invaluable boons."

II. Economic Landmarks

I. 1765–1857. The Creation of a Basis for Economic Progress. Law and Order.

II. 1857–1899. Public Works and the Transformation of India.

III. 1899–1914. The new Nationalism and the new Government Policy. The period of conscious national development of Agriculture and Industry.

FOR the past century and a half Indian economic history may be divided into three periods, the first of which began in 1765, when the right of collecting the revenue in Bengal was given to Clive, and ended with the Mutiny of 1857. At the earlier date the Company began to depend upon revenue from administration instead of profits from trade, and at the later date the Government itself took over the whole responsibility and ruled direct. These years of Company rule may be termed the period of the establishment of law and order, which are the essential basis of economic progress.

The second period covers the years between two great Viceroys—Dalhousie and Curzon. The Mutiny not merely changed the form of government, it ushered in a period of rapid railway building, and the coming of the railways is the real dividing line in the economic history of India. The creation of great engineering undertakings which transformed India are the outstanding economic feature of the years 1857 to 1899, and the period may be termed the era of the Public Works.

The Viceroyalty of Curzon began a third period, the period of conscious and accelerated national development. The years from 1899 to the present day are characterized by a growing sense of Indian nationalism, greater activity and initiative on the part of the Government, and the beginnings of the agricultural and industrial revolutions in India.

PERIOD I

1765–1857

The Creation of a Basis for Economic Progress by the Establishment of Law and Order

Synopsis

(*a*) 1765–1815.

The control of the East India Company by Pitt's India Act.
New British policy for native races.
Importance of the views prevailing in England. *Laissez faire* and the reaction both felt in India.
1793. The permanent settlement of the land Revenue in Bengal.
The trade situation in 1813.

(*b*) 1815–1833.

1813. Trade to India thrown open.
1807 and 1822. Settlement of the land Revenue on a temporary basis in other parts.

(*c*) 1833–1857.

1833. The East India Company ceased to trade.
New objects developed for export. Jute, oilseeds. New imports—cotton piece goods.
Planters in India—indigo, tea, coffee.
Abolition of internal tariffs.
The abolition of the status of slavery, 1843.
The Legal Codes.

The East India Company was founded in 1600 under a charter from the Crown, and as far as English merchants were concerned it had a monopoly of the trade in all the lands and seas between the Cape of Good Hope and Cape Horn. Its express purpose was to carry on trade from certain "factories" or stations, and not to establish a dominion in India. Commercially speaking, for the larger part of the seventeenth century it was far behind the Dutch Company, and the difficulty of getting a sufficiently large supply of spices under the Dutch monopoly led it to develop new lines of trade, such as indigo and saltpetre. The English were the first to bring cotton piece goods to Europe, although these had formed the staple of the inter-Asiatic trade for centuries, the cotton goods of India being used to purchase the spices of the islands.

In the eighteenth century, owing to the activity of the French, the break up of the Moghul Empire, and the conse-

quent insecurity, the British were driven to assert their position by arms if they wished to retain their trade. Up to the middle of the century the Company's agents were only responsible to the Directors of the Company, and these were supervised by an occasional Parliamentary inquiry, generally a matter of bargain for an advance loan by the Company to the Government before the grant of the new charter. With the virtual conquest of Bengal at the Battle of Plassey in 1757, it fell to the Company to reconstruct a territory as well as carry on trade. In 1765 they were given the Diwani, or the right to collect the revenues, and a few commercial agents began handling the resources of the richest part of India in the name of an Emperor. The opulence and arrogance of the returned Nabob roused public opinion at home, and Parliament began to assert its supervisory power in order to see that " a new and vast experiment of ruling a distant and alien race was properly conducted ".[1] A regulating Act was passed in 1773 which set up a form of Parliamentary control, subordinated the Presidencies of Madras and Bombay to Bengal, and established a Supreme Court with English lawyers. The Declaratory Act of 1780, however, directed that their own law and usage should be applied to the people in the country. Thus the two great principles which have governed the British in their dealings with native races were laid down, viz. that Parliament would do its best to secure them from exploitation by commercial adventurers by assuming control and that their own law and customs should be left intact. Parliamentary control was considerably strengthened by Pitt's Act of 1784. " Thus the indefinite dominion derived from Moghul sources in the form of the Diwani of Bengal, Behar, and Orissa, was gradually overlaid by new sovereignty derived from Parliament." [2]

Great Britain was inclined more and more towards *laissez faire* and free trade when India came under her control. It was thought that as much money as possible should be left to fructify in the pockets of the people. Therefore, the economic principles on which Great Britain would try to administer India would be exactly those *laissez faire* principles that were then regarded as universal truths. Internal tariffs would be abolished, a low tariff for revenue only would inevitably be set up, the incidence of the land revenue would

[1] *Montagu Chelmsford Report*, p. 25.
[2] Ibid., p. 26.

be fixed as low as possible so that the balance might "fructify" for the general benefit and slavery would be abolished. The great thing was to establish law and order so that everyone should be able to seek out their own advantage freely. These were the principles that were gradually applied to India.

As time went on, however, it was found that the surplus did not necessarily "fructify", but was spent on litigation or expensive marriage ceremonies. The very certainty of justice induced a litigious people to undertake fresh law-suits and unproductive expenditure. It was found that individuals in India waited for the Government to do things for them, and that India itself could not provide capital, so that gradually an elaborate system of economic paternalism was developed for India after 1857, even before the reaction from *laissez faire*, dating from the 'nineties, began in England itself.

The East India Company had suffered from constant deficits arising out of the wars and civil strife, which were a result of its endeavour to keep order. It could not spare the money for any large schemes of development. When the British Government took over the responsibility for India in 1857, the railways were becoming so potent an instrument in maintaining peace that the Government was able to turn its attention to other things.[1] The Queen's Proclamation on 1st November, 1858, stated that peaceful industry was to be stimulated, works of public utility and improvement were to be promoted, and the Government was to be administered for the benefit of all Her Majesty's subjects in India. "In their prosperity will be our strength, in their contentment our security, in their gratitude our great reward" was the conclusion of the message.

Therefore there was a considerable extension of the Government's economic functions after 1857, which counteracted the *laissez faire* tendency in which the administrators had been reared in England. Moreover, the British Government, having dissolved the Company, was bound to "go one better". Hence the great activity in Public Works. These public works did not "pay" directly in the form of dividends, and were a great drain on Indian finance for many years, although they stimulated the whole economic life of India.

[1] Troops could only be moved ten miles a day; with the railways 400 miles could be covered in a day. *Indian Administration in the past Thirty Years*, 1889, *C.* 5713.

By 1899 *laissez faire* was to a great extent discredited in England itself, a sort of State socialism had set in, the series of factory, mines, and education Acts had created in England an army of inspectors, and Englishmen had become used to regulation. Thus, partly owing to the violent adverse criticism of Indian nationalists and partly owing to the increased belief in Government action in England, there was a great stimulus to fresh Government action in India, and the idea of the creation of a new agriculture and a new industry with Government assistance began to take shape. By 1900 not merely the railways, but the irrigation works paid well, and it was possible, therefore, to consider a much larger outlay on schemes in the future and to extend the scope of all Government operations. It is interesting to conjecture how far the constructive policy of the Government in India, begun after 1857, reacted on the Government in England and helped to produce the reaction in England from *laissez faire*, and to consider how far those administrators like Macaulay, who were trained in India, and afterwards became influential in British politics, brought their ideas with them from India. It is also interesting to see how little the experience of India was utilized for the new tropical colonies in Africa and Malaya; they seem to have been developed, except in forestry matters, uninfluenced by Indian administrators, probably because they were under the Colonial and not the India Office. Their development was "improvised", as Sir F. Lugard puts it, and India was not the model. The native chiefs were, as far as possible, encouraged in the tropical colonies to carry out their own improvements. In India two-thirds of the country was brought directly under British rule. This meant that Western civilization has played, and may continue to play, a large and direct part in the development of India, while in the new Crown colonies the influence was indirect.

The years between 1765 and 1857 have a cleavage at 1833, the date at which the Company ceased to trade.

Between 1765 and 1833 there are certain outstanding landmarks. In 1793 the permanent settlement of Bengal was undertaken, which fixed the land revenue payments over a large area. Owing to the restriction of markets on the Continent during the Napoleonic wars, there was an outcry against the trading monopoly of the Company and an insistent demand that all Englishmen should be able to trade with India. In 1813 this was conceded, and although

the Company still continued to trade, and still had a monopoly of the China trade, it was not the sole trader.[1] The Company's trade dwindled after 1813, and its political activities became more and more prominent. Revenue, not trade, became increasingly its objective. The result was that a new class of merchants began to organize Indian commerce after the abolition of the Company's monopoly. They were not bound by tradition, nor had they to wait for the Company's orders and adjust themselves to the Company's finance. Although many of them were old factors of the Company, they now had a free hand. They put the trade of India on a broader footing, and started new exports.[2] They were essentially anxious to get raw materials for the industrial revolution,[3] and it was they who started the export of cotton piece goods from England to India. The Company had exported piece goods from India to Europe and the Far East, and would not have cut out one of the most promising lines of its own trade.

The chief categories of the Company's export trade prior to 1833 consisted in raw silk, silk goods, calicoes, spices, saltpetre, ivory, and indigo. It is interesting to notice that

[1] The East India Company's monopoly of trade had included all seas and territories from the Cape of Good Hope to the Straits of Magellan. All trade was thrown open within this area except that to China, and the trade to India itself could only be carried on after a licence had been obtained from the East India Company, and for the issue of this, which they had no power to refuse without appeal, a fee was paid. But this permission was limited to the trade between England and India, only the Company could export to the European mainland or carry on a trade between India and other parts of the East. Permission to trade was only accorded to those who used, what was for the day, a very large ship, viz. one of 350 tons, to keep the trade "in respectable hands". This shows the change which came when steamships inaugurated a parcels traffic. When a man could charter 40 cubic feet of space, much smaller traders could do business with India.

[2] "It appears certain that the trade with India, whether of import or export, has materially increased since 1814, and that the increase has been effected by private merchants, while the trade of the Company has experienced a diminution. The House will find it stated in some part of the evidence that the trade has been recently attended with loss, at the same time there is sufficient evidence that the taste and demand for British manufactures has been gradually progressive since the opening of the trade and that those manufactures have found their way to parts of India and the neighbouring countries which they had not been able to reach previously." *Report on East India and China Trade*, 1821, vi, p. 197.

[3] It will be noticed that it is never the Indian trader who has sought out the European market but the European trader who has had to seek out the native trader and develop the overseas trade. That has been the characteristic of the Indian export trade with Europe from the sixteenth century. It is the European who has opened out the new avenues of exchange and who has started many new industries in India itself.

the American war of 1812, in cutting off the British supplies of raw cotton, led to an export of raw cotton from India, and an attempt to develop its culture.[1]

As the Company's share of the trade was declining, the revenue to be obtained from taxation became all-important. Indeed, the Directors declared, in 1821, that it was only the China trade that paid. The land tax was settled on quite different lines from that of 1793, in Madras, Bombay, and the United Provinces, i.e. on the lines of periodical, not permanent, settlement. Inquiries were held in 1828 into slavery with a view to its abolition, and in 1832 the Governor-General, Bentinck, refused to let slaves be moved from one British district to another, thus preventing, to a certain extent, the internal traffic in slaves. In 1843 the legal status of slavery was abolished, i.e. no one could any longer claim a man to be his slave if the slave chose to assert his freedom.[2]

All through this period there was a constant succession of wars. Scindia, a Mahratta chief, had brought in French officers to instruct and command his army of 40,000 men. In Southern India, the Mohammedan ruler of Mysore, Tipoo Sultan, had brought in another French officer to train his army. The Company was bound to undertake military measures, and Wellesley began the era of fresh annexations, chiefly because India had become part of the duel between the French and the English.[3] The Madras Presidency took practically its present shape after the fall of Tipoo in 1799. The Mahrattas were checked in the war of 1802–4, and in the last Mahratta war of 1817–18, when the Bombay Presidency was settled on its present lines, Sind being added later. The years 1823–8 saw the first Burmese war, 1836 the Afghan war, and 1845–49 the Sikh wars which ended in the acquisition of the Punjab. The constant succession of military undertakings shows the difficulty of establishing order in India. The expansion in the North was the most marked. Assam, the Punjab, Jhansi, Nagpur and Oudh, were all successively added to the original Bengal, Bihar, and Orissa, and there was an extension of British influence overseas to Lower Burma.

Wars have to be paid for, and fresh outbreaks guarded

[1] *Report on Trade, East Indies, and China*, 1821, vi.

[2] See pp. 171–4.

[3] When Napoleon went to Suez, Nelson wrote: "I have his dispatches before me, and if the French can get there Bombay is their first object."

against, and the military situation dominated the economic by creating deficits which prevented the consideration of any constructive policy of development as long as the Company had to proceed " with a trowel in one hand and a sword in the other ".[1] The first essential was law and order.

In 1833 it was held to be incompatible to unite trade and Government.

" A company that maintained armies and retailed tea, that carried a sword in one hand and a ledger in the other, was a contradiction, and had she traded with success would have been a prodigy. It was impossible for her to pay that attention to details that is indispensable to the carrying on of commerce with advantage," was the verdict of a contemporary writer.[2]

Even before 1833, the Company had not been allowed to proceed without considerable supervision. In 1812 an inquiry had been undertaken into the management of its affairs before the Charter was renewed in 1813, and another searching inquiry was held in 1831. The result of this last was that the East India Company ceased to be a trader, its former dividends were guaranteed at the rate of ten per cent by the Government, and it became the administrative instrument for carrying on the government of India. The China trade was thrown open at the same time, and ordinary traders could henceforth carry on trade between India and the Far East, and this tended to stimulate Indian trade still further. The British Government being strongly *laissez faire* did not wish to undertake the Government of India itself, and it felt that the Company, knowing the conditions so well, was best left to run the country.

Macaulay, in his speech to the House of Commons in 1833, spoke of the Company's work as " the establishment of order where it had found confusion " and congratulated the House that " the petty dynasties which had kept all India in constant agitation had been quelled " and that the " predatory tribes who in the middle of last century passed annually over the harvests of India with the destructive

[1] The remarkable case with which the English established their rule was explained by the French missionary, Abbé Dubois, who was in India between 1792 and 1823, " Their effort and anxiety to make the people less unhappy than they had been hitherto, above all their inviolable respect for the customs and religious beliefs of the country," and the protection they afforded to the weak against the strong " had all contributed to the consolidation of their power more than their victories or their conquests ".

[2] MacCulloch, *Dictionary of Commerce*, p. 535 (1837).

rapidity of a hurricane" had been "hunted to their strongholds". He continued, "I see a Government anxiously bent on the public good. Even in its errors I recognize a paternal feeling towards the great people committed to its charge." From 1823 onwards it administered "in trust" for England. Its affairs were a subject of constant inquiry, and one commission was held before the Charter of the Company was renewed in 1813, another in 1821, and a very exhaustive inquiry in 1831. The importance of India to England in the first half of the century lay in the fact that India supplied some of the essential raw materials—hides, oil, dyes, jute, and cotton required for the industrial revolution in England, and at the same time afforded a growing market for English manufactures of iron and cotton at a time when the buying power of the continent was restricted, owing to the after effects of the French wars. India also began to supply both tea and sugar in this period.

Nothing is more interesting than to watch the new policy which England was going to apply to her protected peoples being worked out during these years in India. Up to the last quarter of the eighteenth century, England was the great slave trader, and apparently felt no such responsibility for coloured peoples as Spain had shown in her dealings with the native peoples of Spanish America. The agents of the East India Company ruthlessly exploited the situation in Bengal at first, and if they were no worse than the native rulers whom they had displaced, they do not for a short period seem to have been much better. But the doctrine of responsibility, and development instead of exploitation, was asserted quite early, and the trial of Warren Hastings, one of the least venal and most reforming of the Indian administrators of the eighteenth century, served to assert the principle that the English would insist on honesty in the administration of their subject peoples. The same idea of preventing extortion led to the permanent settlement of the revenues of Bengal. The principle of personal freedom continued to be asserted in the efforts taken to put an end to the widespread system of slavery in India.

It is also very interesting to see how steadily the Company refused to let Englishmen settle in India for the purpose of land cultivation. No one but indigo planters under a special permit were allowed to live outside the towns. The reason given was the possible friction of natives and white men, and

the fact that a white man might easily lead a revolt against the Company.[1] The economic results of this prohibition were that although there were large areas of vacant land which Englishmen might have taken up and cultivated as large farms, they could not do so, and the typical cultivation of the ryot was not affected by any alien system being introduced, as in Ireland, at a time when England still fervently believed in the large farm. The land revenue was settled at so high a rate under the Cornwallis settlement that a large number of the great landowners of Bengal were forced to sell their estates. Had it been possible for the English to settle in India at this time, they might have bought these estates, substituting English overlords or adventurers for Indian zemindars. The rigid policy of exclusion by the Company prevented this expropriation by aliens.[2]

The years from 1833 to 1857 witnessed the adoption of a uniform coinage for India in 1835, and the creation of a centralized system of finance for the whole of India in 1833. Prior to that each Presidency had been responsible for its own borrowing, revenue, and expenditure. Henceforth special revenues or grants were merely assigned to the provinces by the Government of India. The most important economic development of the period was, however, the starting of new objects of trade in jute, tea, coffee, hides, raw cotton, and oil seeds.

For the first time, in 1833, Englishmen were allowed to set up as planters in India, and as slavery had been abolished in the West Indies in the same year, men began to take up land in India, where cheap labour was available. After 1833 Indian trade began to assume its modern form of the mass export of important raw materials,[3] and the new products greatly outweighed the old in importance and value. The first result of the freeing of the slaves in the West Indies was

[1] The Europeans in India unconnected with the service either of the Company or of the King in 1828 were given as—

1,595	Bengal, about one-third of whom were connected with indigo,
116	Fort St. George,
236	Bombay,
19	other.
1,966	

Of these the majority were in trade, others were missionaries. Rep. 1831–2, viii, p. 347, where the whole question of the settlement of Europeans in India is discussed.

[2] 1831–2, viii, p. 371.

[3] See note 1, p. 307.

to lead to the development of an export trade in sugar from India.

Jute had first been sent back by the Company's servants in 1795 as a substitute for hemp, but technically it was impossible to work it successfully till 1833. The quantity of jute exported in 1828 was 364 cwt., worth £62. The Crimean war, by cutting off the supplies of Russian flax and hemp, and by increasing the demand for bags, gave an enormous stimulus to the trade. From 1858–63 the average annual export of jute from Calcutta was 967,724 cwt. In 1872–3 the exports of raw jute were worth $4\frac{1}{2}$ millions sterling.[2]

Coffee-planting was commenced in South India in the Wynaad in 1840, and in 1862 there were 9,932 acres under cultivation in that district. By 1865 there were 200 estates, covering 14,613 acres, and the exports in 1860–1 amounted to 19,119,209 lb. In Coorg coffee-planting was begun in 1854, and 73,306 acres were under cultivation in 1870.

The cultivation of tea showed great possibilities before the Company ceased to rule. The Directors had started tea-planting in 1834, and than gave two-thirds of its gardens to the Assam Tea Company. For years it made no profit, and in 1846 its 20*s.* shares sold at 2*s.* 6*d.* The first private garden was started in 1852. By 1858 there were fifty and the Assam Company's shares were at a premium. The development in the 'sixties was very rapid. In 1850 there was one tea estate—that of the Assam Company with 1,876 acres yielding 216,000 lb. By 1870 there were 295 proprietors with 31,303 acres, yielding 6,251,143 lb. of tea. By 1872–3 the plantations covered 304,582 acres, with a yield of 14,670,171 lb.[3]

There had been continual trouble between the indigo

[1] *Imports into England from India.*

		1833.	1843.	1844.
Hides	cwt.	29,337	108,487	
Hemp	cwt.	34,000	227,812	
Linseed	bushels	2,163	64,024	237,960
Cotton	mill. lb.	32	65	88·6
Sheeps' wool	lb.	3,721	1,916,129	2,765,853
Pepper	mill. lb.	7·2	3·6	7·4
Rice	cwt.	179,370	364,689	396,758
Saltpetre	cwt.	143,434	345,822	206,085
Coffee (including Ceylon)	mill. lb.	5·7	13·8	19·4
Indigo	mill. lb.	6·3	5·9	10·6
Cotton piece goods	pieces	290,333	103,097	63,805
Silk goods	pieces	298,580	425,743	

Porter, *Progress of Nation*, p. 750, 2nd ed., 1847.

[2] By 1911–12 no less than 16,203,098 cwt. were sent to Europe.

[3] *Moral and Material Progress*, 1872–3, p. 44.

planters and their tenants throughout the first half of the nineteenth century. The planters did not usually grow the indigo. They advanced money to the ryots and agreed that at least a specified quantity of the weed should be grown and should be paid for at a certain fixed price. If the price rose, the cultivator considered that he was being " done ". Complaints that he was sweated and forced to grow indigo against his inclinations led to rioting, destruction of indigo works, and the burning of planters' houses. An inquiry was held into the subject by a House of Lords Committee in 1830, and another Committee of inquiry was instituted in 1860 in consequence of further troubles and riots. There had been much exaggeration, though there was some foundation for the complaints. The result was that the industry migrated from Bengal to the United Provinces and Tirhut.

It will thus be seen that it was under the Company that the planting era began, but the products did not become of first-rate commercial importance till the period when India had passed into the hands of the Government.

The reason is to be found in the backward state of transport. A commission held in 1858 to secure the settlement of Englishmen in India for purposes of planting, point to this as the great obstacle. Lack of transport facilities is also the burden of the cotton reports of the period.

The Company, in addition to its endeavours to start tea planting, had started iron works in South India with ill success, owing to the scarcity of fuel, and had tried to improve the manufacture of silk.

A great demand had arisen in England for oil for lubricating and other industrial purposes, and the result was that a considerable export of oil seeds had been developed. The value of the oil seeds imported into England in 1857 was no less than £1,850,000. The raw cotton export was another new and striking development, and to no subject was more attention given in England, owing to the shortage of the fibre. The development of supplies of raw cotton in India was considered by several committees from 1848 onwards, and the annual average export from 1845–50 was valued at $1\frac{3}{4}$ millions yearly. Hides, too, were furnished in quantities in response to the ever-growing demand for leather for boots, shoes, furniture, leather belting, harness, and similar purposes. Although wheat did not become a feature of the export trade till the opening of the Suez Canal, rice was

exported from Bengal and Lower Burma in considerable quantities. The shortage of potatoes, which caused the Irish famine in 1845–6, led to a large export of rice from Bengal and Burma to England.

Indeed, between 1833 and 1890 the bulk of the important tropical products which were produced within the Empire was furnished by India.

On the other hand, the English cotton piece goods began to flood the Indian markets, and as they were cheaper, the Indian purchaser was able to be decently clad at smaller cost. But the weavers suffered, not so much because the home market in India was glutted, but because the English cloth filled the other Asiatic markets, like Java and Persia, which had previously been supplied from India. If a tariff had been applied, as some Indian critics think it should have been, it would not have affected the great export markets. There was also a certain specialized local demand in India which the English did not attempt to supply. Nor did the Indian weaving industry die out. It was still a widespread industry in 1918.[1] "In India a far greater degree of resistance has been offered by the handloom to the aggressions of the factory than in England. This is attributable to the great number of specialized types of cloth which slow-moving Indian custom decrees to use; to the fact that the demand for many of these is on so small a scale, while the types themselves are so special as to render it difficult for the power loom to produce them at a profit; to the faithfulness of the weavers, as a caste, to their hereditary trade, and to their unwillingness to take up factory work . . . and to a less extent to the financing of the weaver by his patron and incubus, the money-lending cloth merchant." [2]

As England firmly believed during this period in *laissez faire*, and that free trade was right for all the world, and as she herself was rapidly abolishing all the home tariffs, no protectionist tariff could have been logically applied in India. She was even whittling away the preferences on British shipping in India, and was placing British and foreign goods on an equality in the Indian market as regards tariff. Free trade in shipping and equality in tariff were completely established early in the next period.

To help the Indian weavers, the Company wrote in 1823 recommending the abolition of the internal tariff dues, so

[1] p. 318 *n.*

[2] *Ind. Com.*, p. 11.

that the artisans might have a wider market in India itself. "We are anxious that no impediment should be interposed by our fiscal regulations in the way of any portion of that prosperity which such a branch of industry would otherwise enjoy. We should indeed be very willing to sacrifice revenues where it would appear to check the trade of India, and still more when it could be shown to repress the manufactures in which so great a part of the Indian population is engaged."[1] They were thus willing to sacrifice revenue to secure a better position for the weavers. There is a belief very prevalent in India that the English prohibition of the wearing of cotton goods in 1701 and 1720 was responsible for the alleged ruin of the Indian trade in cotton piece goods. The English market was only a small bit of the great cotton export from India which ranged from Japan and China to the spice islands—Burma, Pegu, Persia, Arabia, West Africa, and Europe outside England. Indian piece goods were exported from England to South and North America and Europe, but the English were not allowed to wear them at home when either "printed or painted". They could and did get them for home consumption "in the white" under a heavy duty on import.

The tariff prohibition on one tiny part of the trade in English hands would not have ruined the Indian industry. Nor is hand-loom weaving a vanished industry to-day, even with the competition of the Bombay cotton mills at their door, so to say. The Indian weaver was always protected by freights to a certain extent, but these dropped rapidly after 1830 and ceased to be such an effective barrier. This reduction in freights was, however, a great stimulus to the Indian export of raw material and a stimulus to Anglo-Indian trade generally.

It must be remembered that this period did not witness a complete change in India from an export of manufactured goods to an export of raw materials. Hides, raw cotton, jute, and tea all need industrial treatment before export. Hides require a certain amount of preparation. Cotton has to be ginned and baled, tea requires highly specialized drying plant, both jute and indigo require treatment to extract the fibre and the dye. Thus the preparation of these staples did involve industrial occupations and the beginnings of manufacturing processes. The loss on the

[1] Quoted Hamilton, *Trade Relations between England and India*, p. 163.

cotton piece goods exports was to a certain extent compensated for by the new industrial cultures, though probably the same classes of people were not affected.

During this half-century one of the greatest of the unifying factors of India was evolved, namely the Indian Codes. If people cannot get law there will be war; if they have any spirit they will fight for their rights if they cannot get them otherwise. An impartial and clear system of law is the greatest step in the maintenance of order and in the promotion of economic progress. This the Company provided.

Another important unifying work had also been accomplished, namely, the abolition of the internal tariff barriers. When the Company took over the control of various parts of India they inherited a complicated system of transit dues and town dues which were intolerable hindrances to all trade. Each of the Presidencies was, in addition, a distinct economic unit with a different sea tariff levied on different principles with different rates.[1] The vexatious nature of the internal customs barriers may be judged from the following letter to the Court of Directors, 1835. The trader was subjected "by the customs to a wearisome process of the search, weighment, and inspection of his goods for the purpose of verifying the passes under which he travels, a process to which he may be subjected in every customs division and sometimes at the caprice of the lowest subordinates belonging to it. The expense even to the fair dealer hence incurred in bribes to the Government's native officers must be considerable, as well as in buying off informers who live by fraud and false witness. The loss of time, the detention from a favourable market, and the enhanced prices necessarily put upon merchandise in order to cover so much expense must all tend to operate against the commercial prosperity of the country." [2]

In Bengal a 5 per cent duty was imposed when raw cotton was brought from one district to another. If, after it was made into yarn, it was further transplanted to be woven, another $7\frac{1}{2}$ per cent was levied. When it was taken further as cotton cloth to be dyed, it paid another $2\frac{1}{2}$ per cent, and if sold as finished cloth another $2\frac{1}{2}$ per cent became due.[3]

[1] Hamilton, *Trade Relations between England and India*, p. 220.
[2] Quoted Hamilton, op. cit., p. 226.
[3] Ibid., p. 221.

No wonder that Lord Ellenborough in 1835 had said in his letter, " I look forward to the time when the whole peninsula of India will be as regards the commercial intercourse of the population, one great Empire."

By 1844 the three Presidencies had assimilated their sea tariff and had abolished the tariffs on their land frontiers. The native States adopted the same procedure in 1850. Thus, before the Mutiny of 1857, internal transit dues and town duties had been abolished, internal free trade was established, and a unified sea customs tariff for the different provinces had been set up. The beginning of the Grand Trunk Road system was inaugurated in 1836, and great trunk lines of railways were planned, though construction had not proceeded very far.

When the Company finally surrendered its power to the British Government, J. S. Mill wrote its Apologia in a Memorandum addressed by the East India Company to Parliament.[1] He stressed the fixing of the land revenue, the abolition of slavery, the formation of the great judicial code and the great increase of trade.[2] He gives the exports as—

1834–5, £7,993,420.
1855–6, £23,039,268, i.e. an increase of 188%.

Imports—

1834–5, £4,261,106.
1855–6, £13,447,027, i.e. 227%.

The Company claimed, in its petition, that it had established a Government " not only one of the purest in intention but one of the most beneficent in action ever known among mankind ", and that it " had been one of the most rapidly improving Governments in the world ".[3]

When one compares the economic condition of India in 1857 and 1757 one cannot doubt the truth of this latter estimate. " Nevertheless, it was their hard destiny to make unloved an Empire." [4]

[1] *Memorandum of the Improvements in the Administration of India during the last Thirty Years*, 1858.
[2] Ib., p. 29.
[3] Ib., p. 115.
[4] Sir W. Hunter, quoted by Sir W. Vincent, " British Rule in India ": *United Empire*, 1924, p. 21.

PERIOD II

1857–1899

The Transformation of India by Public Works

SYNOPSIS

(1) The Lancashire Cotton Famine, 1863–5.

(2) The opening of the Suez Canal, 1869.

(3) The railways as the turning point in Indian Economic History.

(*a*) Effect on government.

Abandonment of *laissez faire* as a policy. The ease of moving troops assisted the maintenance of law and order. The creation of economic unity and greater efficiency in administration.

(*b*) Social effects.

New employments created. The abolition of slavery and serfdom. The stimulus to pilgrimages and movement generally. Greater safety of travel. Death blow to thuggery. Famine relief.

(*c*) Economic effects.

Increase in volume of trade. Equalization of prices in India and conformity with world prices. The pacification of the frontier and the trade with Central Asia. The investment of British capital in India. The growth of specialized crops. Growth of towns. Port development. Road making. The expansion of postal communications.

(*d*) Railway construction and operation.

1850–69. Private capital with Government guarantee of interest, free land grants, deficits.

1869–77. Government construction.

1877–99. Private companies with Government assistance—rapid railway construction to relieve famines.

1899. Railways solvent and revenue assets. The starving of the railways. The Mackay Committee, 1907. The Acworth Commission, 1921. Separation of the Railway Budget from State Finance.

(4) *Famines and Famine Relief.*

(*a*) Reaction on economic development of India. Famines stimulated Railways, Irrigation Works, Scientific Agriculture, Co-operative Societies. Reaction on Land Revenue collection.

(*b*) Famines during British rule.

(i) 1770 (Bengal Famine) to 1877. Food famines.

(ii) 1877–1920. Money famines to be met by provision of Relief Works. Railways prevent food famines. The evolution of the science of famine relief.

(*c*) Problems of Famine Relief.

Different types to be assisted. The provision of water. The cattle problem. Lack of vitality to resist famine and disease.

(*d*) Famine Relief Organization.

(i) To provide and distribute food. The Government *versus* private traders. The prohibition of the export of grain.

(ii) Relief works.

(iii) Relief of those outside the scope of relief works. Takavi loans.

(iv) Restarting after a famine. Credit. Seed.

(v) Finding the money. Problem of adequate relief and economy in relief.

(*e*) Details of famines.

Orissa, 1866. S. India, 1877. Famine insurance, 1878. The Famine Codes, 1883. The Great Famines, 1896–9. Famines no longer so devastating owing to the increased resistance of the people and growing habit of migration to seek work.

(5) *Irrigation.*

(*a*) Effects of irrigation. Security of life, Civilization, Lessened cost of famine relief, Extension of cultivation.

(*b*) Wells, Tanks, and Canals. Protective and Productive Works.

(i) Before the Mutiny.

Revival of the old canals.
Extension of works in new areas.

(ii) After the Mutiny.

Private companies as canal builders—failure.
1866. New Government policy to build canals by raising loans.

(*c*) The Colonization Canals in the north-west desert areas.

1876 Lower Swat Canal. 1882 Sidhnai Canal. 1890 Lower Chenab. Colonization commenced 1892, Jhelum Colony 1901. Jamrao Colony in Sind 1898. Methods of colonization. Success of the colonies.

(iii) Twentieth Century Projects.

New impulse to canals after the famine of 1899. Irrigation Commission, 1901–3.

Building of tanks and protective works. Triple Canal Project, 1912–15. The Sutlej Valley canals and the Sukkur Barrage scheme. Well boring and pumping by gasolene engines.

(6) *Finance and Trade.*

The growth of indebtedness for productive works.
The increase in the revenue and expenditure.
The importance of the land revenue. Other taxes, opium, salt.

Free Trade, 1882.
The cotton duties question.
Increase of trade. Changes in nature of exports and imports. New directions of trade. The falling rupee. The gold standard, 1894. The "Drain".

Emphasis has already been laid on the fact that one of the most striking features in the economic history of India in the past century lies in the fact that economic changes are to a certain extent breaking up the rigidity of the social structure and the isolation and disunity of India. The German Customs Union, formed between 1834 and 1870, meant the disappearance of local tolls and internal tariffs, the adoption of common weights, measures, and coinage. Economic unity preceded political unity. Not till 1870 was there a national federal Government set up, and this had to be clamped, as Bismarck saw, by the railways. Events in India in the past century have been moving in much the same direction as they previously moved in Germany, and the result promises to be somewhat the same. A certain economic unity has been created, and has been followed by a vigorous constructive policy inaugurated by the Government after 1900 under the criticism of a growing national party which, although small numerically, is now beginning to share in the Government and to determine its policy to an increasing extent.

The foundations of economic unity had already been laid before the Mutiny in the common system of Law and the abolition of the internal tariff barriers.

Our second period witnesses the rapid stride towards physical unity in the development of the railway net, and the system of public works undertaken by the Government, involving port development, sanitary engineering, and water works, partly as a consequence of the railways, partly as a result of an increased engineering knowledge which enabled large scale engineering schemes to be carried to a successful conclusion.

The famines between 1866 and 1877 proved the second important stimulus to economic unity and public works. A common famine policy on the scale of a great campaign was laid down to be put in force directly the dearth became acute. A common policy of famine prevention led to the development of agriculture, irrigation works, and more railways.

The other important events of the period were the evolution of a new railway policy which caused the Government to undertake the building and working of the railways by the State, the American Civil War, and the opening of the Suez Canal which joined India more closely to the West by diminishing distance.

The effect of the American Civil War was to create a cotton famine in Lancashire. This reacted on the demand for cotton from India, values increased, and the exports rose to phenomenal heights. During the three years 1863–4 to 1865–6 the value of the cotton exported averaged about £36,500,000.[1] Ginneries were established by Englishmen, money was poured into the country to buy cotton and finance cotton-growing, railways were built to carry cotton and develop the cotton areas, and the specialization of crops began. A great slump followed an era of speculation, but the Indian agriculturist on the black cotton soil had been jerked out of a self-sufficing agriculture.[2] The money made in the cotton boom was invested in the Bombay mills, and there were no less than twenty-nine in 1876.[3] The collapse of the cotton boom was followed by a great "slump" in India.

The effect of the Suez Canal was to increase the whole foreign trade of India, especially stimulating the trade between India and the Mediterranean ports. By helping to reduce the voyage to a fortnight instead of the three months taken by the old sailing ships in going round by the Cape, the combination of the steamship and the canal made for a reduction in freights which became especially marked in the 'eighties and continued throughout the 'nineties,[4] and this encouraged the use of the Canal by all kinds of freight, not merely expensive goods that would stand high dues and charges.

In 1883 we find that wheat and tea were going through the Canal in considerable quantities, but that rice and jute

[1] *Moral and Material Progress*, 1882–3, p. 233.

[2] "There have been two periods of great prosperity for the cotton country, the first during the time of the American Civil War and the second in recent years. During the first it was said that the cultivators made the tyres of their cart wheels of silver; in the last their prosperity has had a more tragic effect, and it has been officially reported that a number of suicides were committed 'in a delirium of joy at the extraordinary profits of agriculture'." Sir J. Miller, "Central Provinces": *J.R. Soc. Arts*, vol. cx, 1912, p. 624.

[3] The town of Bombay owed much to the cotton famine during the Civil War. "From exports of cotton to the extent of 5½ millions the value rose to 14, 27, 30, 35 millions between 1862 and 1866, and it is computed in cotton alone the wealth of Bombay was increased by seventy millions." Speculation was rife, the value of land trebled. Reclamation of Back Bay was undertaken, and shares Rs. 4,000 paid up rose to Rs. 25,000 and Rs. 46,000. There was a corresponding crash when cotton fell in price after the war. *J.R. Soc. Arts*, Forrest, "Bombay," 1901, p. 579.

[4] *Fiscal Blue Book*, *Cd.* 2337, 1904, p. 253 ff.

were still going round by the Cape.[1] This was altered in the next ten years. Wheat does not travel well through the Tropics, it is apt to heat. To export it from India to England before the days of the Canal meant that it had to go through the Tropics twice. Hence the Canal not merely saved time on wheat but enabled it to be delivered in good condition. Indeed, the Canal practically created the large export trade in wheat.[2] In 1883 it seems that actual freights were not as yet cheaper since the steamer freights were higher than those of sailing ships, to which the Canal dues had to be added. Where speed was important, or perishable commodities had to be carried, the trade received a great stimulus. The Canal with the greater economy of time saved interest on capital invested in the goods in transit and made for a quicker turnover. There was also a great gain in safety and in insurance rates since the ships going by the Canal did not have to encounter the same dangers and delays from monsoons and storms as in the Cape voyage.

Suez proved to be a very important entrepot. It was stated that in 1881 no less than $5\frac{1}{2}$ per cent of the wheat exported "rested" by the Canal to await further orders. This quantity had risen to $15\frac{1}{2}$ per cent by 1891, and no less than $28\frac{1}{2}$ per cent of the rice was similarly "rested" in that year.[3] England's entrepot distributing business in Indian goods suffered considerably, as they were now dropped en route at the Mediterranean ports. This economized time and middlemen's fees and stimulated the trade of India.

A great deal of the oil from ground nuts had been

[1] *Report on Suez Canal*, 1883.

The tonnage of the vessels engaged in foreign trade of India also shows the effect of the Canal.

	Entered.	*Cleared.*
1868–9	2,185,961	2,251,310
1871–2	2,282,853	2,363,244
1881–2	3,632,248	3,736,638
1891–2	4,308,375	4,282,276

Decennial Report, 1894, p. 316.

	Wheat exported. cwt.	*Rice.* cwt.
1874–5	1,074,000	16,941,000
1884–5	20,956,000	26,832,000
1891–2	30,307,000	32,740,000

This table from the *Decennial Report*, 1894, (23), p. 319, shows the large quantity of grain handled.

[3] *Decennial Report*, 1894, p. 320.

previously expressed in India, now the export took the form of the ground nut itself which was dealt with in bulk at Marseilles. While this deprived the Indian peoples of a primitive manufacture, the Suez Canal probably enabled the cultivator to hold his own in competition with the ground nuts from Gambia and Senegal which had a much shorter distance to travel. At present India takes the bulk of her imports from Great Britain and the bulk of her exports, i.e. over 60 per cent, go to foreign countries. A large proportion of this trade was carried on with continental Europe. It was just this European trade that received such an impetus from the Canal. Tea went to Odessa, silk and oil seeds to Marseilles. On the other hand, all imports were cheapened, and especially the iron, steel, machinery, and railway plant, which together form one of the largest items in the import trade of India and on which transport freights are heavy. India was thus able to obtain her modern equipment on cheaper terms than before. The drop in freights also accelerated the import of cotton piece goods and other articles which have to some extent affected the village artisan by inducing competition. The very conservatism of India, however, makes such displacement slow, and it is a moot point whether it is the competition of imported goods or the greater profit of agriculture that is causing people to leave domestic industrial occupations.[1]

The Suez Canal had important reactions on the administration. It was now quite easy for officials to come home every two or three years. They were therefore less firmly attached to India. When they went out again they were probably transferred to another district. Lord Roberts, in his *Forty-one Years in India,* only records two homecomings. This divorce of the English official from a special locality in India through the ease of transfer to other parts and from India itself through the ease of returning home, has of

[1] Several known weaving castes have almost entirely abandoned their looms, but as a rule the proportion who still live by weaving ranges from a half to three-quarters. The results are very similar in the case of the potter, barber, and metal and wood working castes.

On the whole agriculture is more responsible than any other pursuit for drawing people away from their hereditary callings. The great rise which has taken place of late years in the prices of all kinds of produce has largely increased the profits from agriculture, while industrial pursuits have become less remunerative, owing to the competition with cheap machine-made products of Western factories.—Gait, "Indian Census," 1911, *J.R. Soc. Arts,* 1914, p. 534.

itself made a case for the employment of larger numbers of officials of native birth.

The protection of the tenants against rack renting and eviction by landlords and the creation of a new occupancy tenure, the establishment of free trade with a tariff for revenue only, with the consequent abolition of preferences on British goods, were also features of this period.

All this economic activity gave rise to a national consciousness on the part of educated Indians. The new developments meant a rapid spread of Western influence and ideas, and in themselves led to a reaction against westernization in favour of Indian native culture. The same movement was observable in Russia after 1878, and gave rise to the Slavophil movement, and high protectionist tariffs.[1]

In India the period of Akbar was idealized. Many educated Indians began to long for a return to some former existence when everyone was supposed to be content and materialism was held in abeyance, a state of affairs, so it was maintained, created by Indians themselves. Historians might show that such a state of affairs never existed, but the growing national pride chose to assume that it had, as it helped to prove that Indians could create a civilization of their own based on law, order, and content. It was the European ingress that was held responsible for the collapse.

The Indian National Congress was formed in 1885, and an attack was launched on England's economic policy in India. It was asserted that the land revenue demands were too high, and crushed the people, that the land revenue policy had caused the famines, that the railway rates and fares were not cheap enough, and were badly managed, that Indian cotton producers were sacrificed to Lancashire under the free trade system, that wheat was exported when India was starving, and that the Government had neglected to develop Indian resources and that the drain of the excess of exports over imports was ruining India, and was a tribute levied by India's oppressor—Great Britain. While such criticism was a gross exaggeration, it formed an excellent party cry. It was in itself a sign of England's success in India. She had roused an economic sense in a people notoriously non-material, owing to history

[1] Schulze Gaevernitz, *Volkswirtschaftliche Studien aus Russland.*

and religion, and she had created a national aspiration, even if based on misconceptions of her policy and her work. The very frank criticism was itself a tribute to the freedom she had created.

The Railways and their Economic Effect

Of all the striking economic changes of the period, none equalled in importance the creation of the railway net. Although railways had been considered and started in 1850, only 300 miles were open by 1857. The result of the Mutiny was to give a great impetus to their extension, and to that of the telegraphs. This was partly owing to the desire for future security to be gained by an easy and rapid movement of troops, partly to the wish to promote the development of the resources of the country. A new type of Government has to do something different from its predecessor to prove its superiority.

When it is realized that every rail and every locomotive, and at first even the sleepers, had to be brought to India round the Cape before 1869, and that English artisans had to be imported in large numbers to train Indian agriculturists to work the railways as drivers, shunters, and firemen, that few trained masons were obtainable, that brick-making, other than sundried bricks, was unknown in many districts and had to be taught, that every bridge and every yard of telegraph wire had to be fetched from England and primitive low caste men superintended to put them up, and that Indian clerks had to be trained to the clerical work necessary to control the working of the system, then it is clear that the railways not merely began the transformation of India's trade, but affected the foundations of Indian society.

When one grasps that in 1868 Madras was an open roadstead, and that goods, including railway material, had to be landed with difficulty through the surf at exorbitant rates, and that it was the only harbour of any importance on all that Eastern coast, that Calcutta, a hundred miles inland, had only a few jetties on the Hooghly even in 1878, that Bombay was only a small port, and Karachi little more than a native harbour which would only take vessels of 10 feet of draft, and that Indian harbours were constantly silting up, then it is clear that harbour works must necessarily accompany the railway development if the growing export and

import trade were to be handled. The era of Public Works meant not merely the unification but the transformation of India.

Up to 1857, the Company had largely worked on a basis of what it found in India. It maintained the same type of revenue and the Hindu and Mohammedan law. It left the social system untouched except for the abolition of slavery. It was prepared to continue the system it found, and merely aimed at preventing gross abuses. But, nevertheless, it had already begun changing India. This was recognized in the speech made in 1877 by the Viceroy at the banquet celebrating the assumption by Queen Victoria of the title of Empress of India.[1]

"There is one thing above all others that the British Empire in India does mean. It means this. It means that all its subjects shall live at peace with one another; that every one of them shall be free to grow rich in his own way, provided his way be not a criminal way; that every one of them shall be free to hold and follow his own religious belief without assailing the religious beliefs of other people. At first sight that may seem a very plain and simple policy and very easy to be applied. But when you come to apply it to an empire, multitudinous in its traditions, as well as in its inhabitants, almost infinite in the variety of races which populate it, and of creeds which have shaped their character, you find that it involves administrative problems unsolved by Cæsar, unsolved by Charlemagne, unsolved by Akbar. It seems a very simple thing to say that we shall keep the peace of the empire; but if we are to keep the peace of it, we must have laws to settle quarrels which would otherwise disturb its peace; and if we are to have such laws, we must frame them into a system at once comprehensive and intelligible. Again, if we are to enforce any such system of law, we must have judges to administer it, and police to carry out the orders of the judges, and then we must have troops to protect the judges, the police, and all concerned. Well then, when you come to introduce this elaborate system of administration into a vast continent . . . you find that the work in which you are engaged is nothing less than this, that you are modifying, unavoidably modifying—not harshly, not suddenly, but slowly, gently, and with sympathy, but still modifying the whole collective social life and character of the population of the Empire."

[1] Quoted Lovett, *The Indian Nationalist Movement*, p. 24.

To this slow modification the railways came almost as an electric shock. They opened a new era of Government activity in India, while at the same time they profoundly affected both the social and economic structure of India. The " stationary state " of India ceased.

No longer could the Government follow the native traditional system. The railway was a wholly new and modernizing factor. The Government had to guarantee interest on the capital raised to build the lines, and after 1869 it even built and worked some of the lines itself. The telegraphs followed, the postal service grew, and both multiplied the numbers of Government servants. On the one hand the deficit on the railways up to 1900 increased the difficulties of finance ; on the other, the railways enriched the country and made it easier to get taxation from the land and the customs. They were an integral part of the whole system of official famine relief, and on them rested the success of the great canal colonies, which they made into paying propositions by providing markets. From the very beginning the railways were under Government control, and they marked the abandonment of the era of *laissez faire* for India. So many other undertakings are bound up with railways that the creation of the system meant an increase of State activity all round. It was reflected in the taking of the first census in 1871, in which it was found that the population had been under-estimated by millions. In Bengal the estimate had been 38 to 42 millions ; the census showed the population to be 67 millions. In Tirhut the return of $1\frac{1}{2}$ millions was found to be out by 3 millions, the actual population being $4\frac{1}{2}$ millions.[1]

Government activity not merely manifested itself in all sorts of sanitary, colonization, and cotton commissions, but in the creation of a forest service, in the creation of the Survey department of India, and in the creation of a Government engineering department to undertake Public Works.

In 1889 the writer of an official report on the English work in India states that, " A regular system has been established, and is maintained, of registering trade across the sea and land frontiers of India, and on the chief internal traffic routes ; of observing the movement of prices at some hundreds of marts ; of registering the rainfall and other meteorological phenomena at several stations in every province ; of

[1] *C.* 5713, p. 5.

ascertaining from week to week the condition and prospects of the crops in every district; of registering births and deaths, and recording the results of epidemic and epizootic disease over the greater part of India. The results of all these observations and registrations are published either weekly or monthly, and there is thus given to the public, to traders, and to the Government, early and accurate information of much practical value which was not available in any shape thirty years ago." [1]

Perhaps the most important effect of the creation of railway system as far as the Government was concerned lay in the fact that it enabled England to keep the peace. After 1857 there were no more wars except in Upper Burma, and on the frontier.

"After all, the first condition of improving India is to hold it, and the system of Indian railways in case of concentration, carriage of supplies and munitions, in averting disease and fatigue during sultry marches and sparing the hateful necessity of pressing the carts and oxen of the country people—their only capital—for purposes of service, has revolutionized the military history of India." [2] In the days before the railway it often took a regiment six months to march from Calcutta to Peshawar. It took Lord Roberts, when a young subaltern, in 1852, three months to get from Dum Dum to Peshawar when he was travelling to join his father and his regiment.[3]

In the days of the Directors, the sheer expense of military operations had prevented them from embarking on any big scheme for the development of the country. With peace, money could be found for Public Works. Railways also made for the unification of India, and for the maintenance of a strong central Government, which in itself was a sign of unity.

"Distance of space, mountains, and desert, vast intervening regions of forest, and mighty rivers had placed barriers to any central government in India, barriers which the native dynasties had been able for a time to overstep, but never in the long run to overcome. The railway enables a Governor to visit as many districts in a few months as formerly occupied his tour during as many years." [4] "Rail-

[1] *C.* 5713, p. 5. "Indian Administration in the last Thirty Years." 1889.
[2] Arnold, *Dalhousie*, ii, p. 127.
[3] *Forty-One Years in India*, chap. ii.
[4] Hunter, *Life of Dalhousie*. Sir Charles Lyall recorded that before the days of swift steamer communications and railways it took an official

ways," wrote Sir Edwin Arnold, in 1865, " may do for India what dynasties have never done—what the genius of Akbar the Magnificent could not effect by government, nor the cruelty of Tippoo Sahib by violence—they may make India a nation." In another place he wrote, " We are making a people in India where hitherto there have been a hundred tribes, but no people ".[1] Sixty years later this prophecy was justified. The Industrial Commission of 1918 reported, " The existence of these communications has itself an educative effect on the people, has gradually helped to render labour more fluid and incidentally more costly, and has added to the sense of political unity among the more educated classes." [2]

Apart from the effect on Government and the creation of unity, the railways have had certain important social effects.

The railways provided new employments for the people, both in making and working them, and their effect on raising the position of the coolie and artisan class was especially noticeable.[3] We have already seen that they solved the problem of serfdom and slavery by providing an alternative employment.

The growing industrialism of India also hinged on railway transport for coal and raw materials, as well as for the distribution of the finished goods. The new factory class was thus a creation of the railway. This may be seen in what was formerly so isolated a region as the Central Provinces. It is even more marked in the capitalized province of Bombay.

" In the Central Provinces many circumstances have combined to enhance the value of labour. It is wanted for

in 1880 longer to go from Calcutta to Upper Assam than it took him to go from England to Calcutta. *J.R. Soc. Arts*, 1903, " Assam," p. 624. The Commander-in-Chief who left Calcutta on 2nd July, 1812, to visit the outposts of Bengal, took with him a hundred boats for his transport. He was thought to have accomplished a rapid journey to Cawnpore in eleven weeks. Twenty years later Lord William Bentinck ordered steam-boats to be built, and accomplished the journey to Allahabad in three weeks. See Warner, " Our Work in India in the Nineteenth Century," *J.R. Soc. Arts*, 1900, p. 219.

[1] *Administration of Lord Dalhousie*, ii, p. 241.

[2] *Cmd.* 51, p. 11.

[3] Sir T. Morison, *Economic Organization of an Indian Province*, 181, quotes Mr. Crooke as saying in 1888 : " The wages of certain classes of artisans, particularly masons, blacksmiths, and carpenters have gone up by leaps and bounds since employment opened in public works. As far as I can judge their pay has about doubled within the last generation."

the mills and the cotton presses, the mines and quarries, for the railways and irrigation works apart from the ordinary demands of seed time and harvest. It is difficult to state the rise of wages in figures, because agricultural wages have always been largely paid at customary rates in kind, but that the labourer can command far higher remuneration than before, is a patent fact that is by no means always welcome to their old employers . . . The change is not confined to common unskilled labour. There is a much greater demand for the skilled mechanic, and the next generation of Indian workmen is likely to develop a much higher degree of mechanical skill than its predecessors. The effect of the training in technical schools, and still more of the training in the great workshops on the railways and at such places as the gun carriage factory, in Jamalpur is only now beginning to make itself felt, but it means the creation of a race of skilled artisans with all the independence of that class. The rapid emergence of the ordinary labourer from a condition that gave him a bare subsistence to one of comparative comfort, or even of comparative affluence, and from a state almost of servitude to one of freedom, can hardly fail to have a profound effect on the constitution and character of Indian society." [1]

It is interesting to notice how the development of transport improved the financial position of the peasant. In the days of village isolation the only person to whom he could sell his grain was the village grain dealer, who was usually the village moneylender as well. This single dealer could make his own price, and after he had bought all he could dispose of, and his capital was limited, there were no purchasers left, and a good harvest was almost as disastrous as a bad one, because the bottom dropped out of prices. As soon as metalled roads were constructed, the cultivator could take the grain to another market, where he could perhaps meet several grain dealers, but the railways have given him the market of all India and the telegraph information as to the prices.

Personal mobility was also stimulated by railways.

In Gujarat "less than twenty-five years ago, on the occasion of a severe famine, the people were still economically so backward that they would not even sell their cattle and that they refused to move a few miles in search of work.

[1] Sir J. Miller, op. cit., p. 626.

It is now an everyday occurrence for the cultivators of that province to take the train to Bombay in order to sell their cotton themselves in the best market; to no inconsiderable extent they speculate in shares; and they watch with eagerness the telegrams from the exchanges of New York and London".[1]

One of their most interesting results lay in the increase of pilgrimages. Messrs. Cook & Sons, under a convention with the Bombay Government, conducted Mussulmen to Mecca, and convenient branch railways which paid 6 per cent were constructed to leading Hindu shrines.

"The chances of a god doing a large and increasing business are greatly improved by a railway station. Juggernaut himself, after defying the calumnies of a century, now finds his popularity imperilled for want of railway communication. The prospects of 'the Lord of the World' rise and fall as the Secretary of State is rumoured in India to be willing to grant terms to the proposers of the branch Orissa line at three or three and a half per cent. But the pilgrimage by return ticket, with the children at half-price, while it promotes joyous gatherings of the people in honour of the gods is death to fanaticism."[2] Such travels tends to break down isolation, and makes it seem less difficult to migrate to plantations or to coal mines and factories, and is the most active instrument of education among an illiterate people. Some authorities hold that the railways tend to break down caste, as the Sudra and the Brahmin can both travel in the same carriage if they pay the same fare, and receive equal treatment. Others consider that the ease of pilgrimage increases faith and hardens the caste regime.

It is difficult to stress too much the greater safety of travel. The thugs had joined themselves to travellers and had executed their victims by hundreds. When many persons travelled together in trains, they were so much safer. No greater blow could be struck at thuggery than the railway.[3]

Perhaps in no direction has the railway been more useful than in famine relief. We read of ship loads of grain unable to proceed down the coast owing to the adverse monsoon while hundreds were dying of starvation. In the famine of

[1] "Progress of Co-operative Banking in India," O. Rothfeld, *J.R. Soc. Arts*, 1924, p. 374, quoting from his own experience.
[2] Hunter, *India of the Queen*, pp. 36–7.
[3] *Confessions of a Thug.*

1866 no less than 88 military officers, 2,116 native officers and soldiers were engaged in supervising the grain transport into a train of over 100,000 carts, some 14,000 pack animals, 2,300 country boats, and 23 steamers.[1] Railways do not feed on the way like animals, and are not greatly hindered by climatic disturbances. Incidentally, railway transport makes famine relief less costly, and this means the lightening of the burden on the Indian taxpayer. The wheat of the Punjab is now easily distributed all over India in a scarcity, and rice from Rangoon can be sent inland with ease. "In the great South India famine of 1877, the most terrible famine of which there is any authentic record, four railway lines were at one time carrying into the famine tract 4,000 tons of food a day from the surplus of Bengal, Burma, Nagpur, and North India. This represented a day's meal for nearly seven millions of people. Not one-tenth of this quantity could have reached the afflicted provinces or could have been distributed in time with the means of communication that existed in 1857." [2] On the other hand, stocks are not kept in a district to the same extent as formerly, and so there is not the same local reserve against bad times. But owing to the railways, all India is now the reserve instead of local hoards. The modern problem is to provide work so that people may be able to get money to buy grain.

One of the most important preventive measures of famines has been the creation of the Canal Colonies of the Indus and its tributaries, which constitute a great wheat reserve, as the rivers, being snow-fed, do not fail like the rains. Not merely has the pressure of population been to some extent relieved, but an immense wheat-producing area has been called into existence to relieve other areas in a bad monsoon. These colonies could not have flourished without the railways to take the surplus grain and the North-Western railway system in the Punjab leading down to Karachi has become one of the important grain lines of the world.

In 1908, when there was a very severe and widespread failure of the crops owing to drought in the United Provinces, there was at the same time a fair crop in the canal-irrigated areas of the Punjab. The surplus of the Punjab was at once diverted to the United Provinces, and "poured into every railway station in

[1] Sir C. C. Stevens, *J.R. Soc. Arts*, vol. xlix, pp. 302–4.
[2] *Report on Thirty Years' Administration*, 1889. *C.* 5713, p. 31.

the distressed tract, keeping down prices there, and staving off famine conditions. Had it not been for the railways, it would have been impossible to get enough food into the famine-stricken area in time to save the people, prices would have gone up enormously, and thousands would probably have died of starvation. Meanwhile, the peasants on the Punjab canals would have found it impossible to sell their surplus grain except at excessively low prices ".[1]

The purely economic effects of the railways were as far reaching as the social results. They increased the whole volume of trade, and facilitated all exports and imports.

" The extension of trade may be judged from the fact that whereas the Court of Directors reported that the value of the exports and imports in 1856 to be 39¾ millions sterling, i.e. 25½ and 14¼ millions respectively, the corresponding totals thirty years later, 1887–8, were 90½ millions of exports, and 65 millions worth of imports, or 155½ millions sterling of total trade. The total trade in value was nearly quadrupled, while the actual bulk of trade increased in even greater proportions as the prices of most of the goods exported were lower than in 1856." [2]

The railways overcame the barrier of the Western Ghats, promoted the cotton export from Bombay, and later the transmission of the raw material to the mills of Bombay and Cawnpore. When goods were carried, as they had had to be carried before the railway era, hundreds of miles on the backs of bullocks, great damage occurred, especially to cotton, from exposure to the wet, and from accidents and delays. It frequently happened that the rains came on before the journey was finished, and the produce had to be held over to the following season in the days when sailing ships had to fit in with the monsoon. Such was the report of the Cotton Committee in 1848, which spoke of the " entire absence of bridges " and said that " traffic is conducted at an enormous cost of money, labour, and time ".

Speaking of the Central Provinces, in 1912, Sir. J. Miller said, " The area under rice now amounts to about 7,500 square miles, and the railway has now given a commercial value to the production of this crop. Formerly, in Chattisgarh, the surplus produce was stored or rotted. Now the railway cannot easily carry the stocks for export. In the

[1] Sir J. Wilson, " The Punjab," *J.R. Soc. Arts*, 24th December, 1909, p. 142.
[2] *C.* 5713, p. 24.

busy season the stations are heaped with bags of rice, and telegrams are wildly dispatched to the railway officials and to every authority in India, from the Government of India downwards, that can be supposed to bring influence to bear on railway administration, complaining of the want of transport." [1] The railways thus began the commercial and industrial revolution of India, and the development of its natural resources.

Large sales of raw cotton, hides, and oil seeds, whether used in India or exported, tend to make for unity. Districts which specialized in one product, had to buy their foodstuffs from somewhere else, exchange was essential, one region began to depend upon another, and the result was inter-dependence.

If people could sell they could buy, and manufactured goods, whether made in India or abroad, began to filter into the villages. "Vessels and implements of iron, brass, and copper are now commonly used in the villages, and their price is within reach of almost all classes. Petty articles of domestic use or personal ornament, such as scissors, mirrors, bangles, and the thousand and one glittering trifles with which the rural huckster decks his stall, have poured in from abroad. Drugs and patent medicines of all kinds, Indian and foreign, command a ready sale. Sewing machines are found nearly everywhere, and bicycles are in ever-increasing demand. The import of brass sheets has reduced the services of the brass founder, but has greatly extended the business of the maker of brass hollow ware. Cheaper iron in convenient sections has helped the cultivator to buy more and better carts."

While the effect of imported articles has been small on the whole, owing to poverty and unwillingness to accept innovations in food and clothing, the Industrial Commission Report adds, "But the enormously extended use of cotton cloth, especially of the finer counts, of woollen clothing, the introduction of kerosene oil, matches, collapsible umbrellas, and of better and cheaper cutlery and soap, have added appreciably to the comfort of the people." [2]

One authority claimed that the decline of village industries through the possibility of purchasing factory-made goods has resulted in the village artisans taking up land and has

[1] *J.R. Soc. Arts*, 1912, p. 624.
[2] *Industrial Commission*, 1918, *Cmd.* 51, p. 8.

increased the pressure on the land. Others consider that the decline is due to the growing value of agricultural produce, for which an ever larger market is being found. The village artisan is therefore tending to devote himself solely to agriculture, and is inclined to drop home industry.[1]

While the facilities of transport actually raised the price of agricultural produce in many places, because it could now get a market, the price of other commodities such a salt, was lowered by the spread of the railway net. The salt of East Oudh and Rohilkund used to come from Rajputana, two months' journey by pack bullock, camel, or cart. Most parts of India are hundreds of miles distant from salt sources. Nagpur is 500 miles from the Bombay salt sources, and salt used to be retailed at 11 lb. per rupee. The railway was opened to Nagpur in 1866, and the price of salt dropped to 19 lb. per rupee, i.e. almost halved. The rate of consumption rose from 12 lb. per head about 1866 to 18 lb. by 1886.[2] Some of this increase may be ascribed, however, to the reduction of the salt tax.

The railways also had far-reaching reactions on the whole countryside and on agricultural methods. In earlier times almost every village grew its own food and provided its own necessities, such as sugar, dyes, oil, pottery, and cloth. Each village, therefore, had its patch of sugar, whether the soil were suitable or not, and likewise its patch of cotton. The result of the railway is that cotton is now concentrated in areas which are specially adapted to its various types, 6,500 square miles being under this crop in the Central Provinces alone in 1909–10,[3] the cultivators have concentrated on jute in Bengal, and sugar cane is disappearing from such places as the arid plains of Central India. The people there now conserve their water, grow cotton, and sell it to buy sugar. "The people have been led to make this change by the cheap railway and steamer transport, and by the construction of roads which, while facilitating the introduction of foreign imports, also render available to the farmer in his distant and land-locked village a large share of the price offered by far-off nations for articles which once merely supplied the needs of Indian rural life. Markets have sprung up on or near the railway where the foreign exporters or the larger Indian collecting firms have their agencies, and the

[1] Gait, *J.R. Soc. Arts*, 1914, p. 634, "Indian Census, 1911."
[2] *C.* 5713, 1889, p. 13.
[3] Miller, op. cit., p. 624 (*b*).

ryot is not now far behindhand in his knowledge of the fluctuations in the world prices of the principal crops which he grows." [1]

It is extraordinarily interesting to see how the railways have brought Indian produce within the circle of world-prices. It has been described by Sir James Wilson as follows [2]:—

"In ordinary years there is a steady stream of produce down the Indus valley to Karachi, and from there by sea to other countries, and prices in almost every village in the Punjab are determined from day to day not only by the condition of the crops and the local demand, but by the course of prices in the great markets of the world. Several exporting firms have agents in all the large towns of the Punjab, who are in constant telegraphic communication with their principals, and through them with Europe and America. If prices of agricultural produce go up in London, Liverpool, or Chicago, these agents, within a few hours receive instructions to offer better prices in the Punjab markets for export, the price in the market goes up at once in response, and the news soon spreads to the smaller towns and villages, and causes a corresponding rise of prices there. A striking instance of this was seen during the attempted corner in wheat in Chicago some years ago. There was nothing in India itself to cause any marked change in prices. But, as day after day the price of wheat rose in Chicago, it went on rising in every Punjab town and village until it reached something like famine rates; then when the Chicago corner collapsed, down went prices all over the Punjab, and reached their former level in a few days.

"In consequence of this improvement of communications, the price of agricultural produce in the villages has not only become more equable and more stable, but has risen in a marked degree. In the great Amritsar market it is now on the average 40 per cent higher than it was 35 years ago, and the rise is higher still in the distant villages which were formerly out of reach of a railway.

"As at the same time the cost of imported articles has fallen, owing to the cheapening of the means of transport, it may safely be said that in the average Punjab village the produce of an average acre of land will now fetch quite double the amount of such things as cotton-cloth, metals,

[1] *Industrial Commission*, p. 8.
[2] "The Punjab," *J.R. Soc. Arts*, 1909, pp. 142–3.

mineral oil or imported articles of use or ornament that it did thirty or forty years ago. In 1828 and 1829 in Gujarat, 'the garden of India' part of the land tax had to be remitted, not because of the failure of the crops, but because of their abundance. It was impossible to convey them to distant markets as there was no transport, and grain was simply unsaleable." [1]

Sir John Miller also spoke of the way in which the various parts of the Central Provinces were entirely shut off from trade with each other prior to the railways. "In 1862, wheat sold for 80 seers to the rupee in Chattisgarh, 44 seers at Jamalpur, and 21 seers at Nagpur. If prices could vary so enormously within one province it gives some idea of the changes in price levels which railways began to inaugurate. The construction of railways has now so entirely altered the situation (in the Central Provinces) that it has been well referred to as much the most important fact in the history of the province. The railways have allowed of the development both of the agricultural and mineral wealth of the country. They have given mobility to labour, and rendered possible the beginnings of organized industry; they have done much to weld together the disjointed portions of the Province into a corporate whole." [2]

The effect of the railways in pacifying the border on the North-West and promoting trade with Central Asia and Afghanistan is also remarkable. Between 1849 and 1911 no less than fifty-six military expeditions were undertaken to keep order. In 1881–2 the locomotive reached Peshawar, and was extended in 1897 to the foot of the Malakand Pass. "It has developed into an artery of commerce to an extent that justified its conversion from a narrow to a broad gauge." "In a wild country a railway has, by the way, a powerful sedative effect which all makes for peace and order." [3]

This was confirmed by Lord Minto, speaking of the marvellous change on the frontier from the time when he went out in 1878 and returned as Viceroy in 1905. The only

[1] Lely, "Famine in India," *J.R. Soc. Arts*, 1907, p. 417.
[2] Miller, *J.R. Soc. Arts*, p. 623 (*a*).
[3] Merk, "North-West Frontier," *J.R. Soc. Arts*, 1911, p. 751. "Who that fought on the Malakand in 1897 could have dreamt that drills worked by electricity would soon be boring a tunnel under the battle-ground and that within fourteen years of a fierce rising of fanatics, the chiefs of the Lower Swat would be subscribing towards the establishment of a Lady Minto Female Hospital in their midst?" Ib., p. 760 (*a*).

request made to him then by the once insurgent tribes was for the doubling of the railway to Dargai. "The civilizing power of the railways," he said, "was enormous. They brought people into touch with one another; they enabled the frontier tribes to know us and trust us." [1]

The railway had as important an effect on the trade of the frontier as on its pacification. It must be borne in mind that the importance of this region lies in the fact that these passes connect India with Central Asia and Afghanistan.

The description of this trade, given in 1873, shows the difficulty of the frontier trade. After speaking of the unequal and heavy exactions at every stage of the road, the tale continues: "But the Povindahs banded together in large caravans to resist exaction that would render their trade impossible. They defied the robber tribes here, compounded with them there, avoided or slipped past in the night some customs post of weaker chiefs whose pursuing emissaries they could defy, and bribed officials at others to shut their eyes to the value of the richer bales. And so, sorely harassed at every step, losing men, horses, camels, bales of merchandise here and there on their way, bribing, cajoling, bullying, defying, fighting twice every year, did the caravans of these hardy traders seeking their precarious gains, battle their desperate way to the Punjab. The Kaplas have to pass the Sulaiman mountains in one great company for mutual protection. They throw out advance and rear-guards, and occupy difficult portions of the road in force while camels pass. At night the Waziris often make attacks and plunder in spite of sentries and pickets. Throughout the day these robbers hang on the skirts of the Kaplas along the hilltops and in the ravines waiting for opportunities to make a dash on a camel or two . . . The Povindahs number some 12,000 fighting men with 60,000 camels, and their trade by the Gomil Pass is worth £60,000, in spite of the serious disadvantages with which they have to contend. Every year they lose a hundred or more men, and at least two per cent of the camels, besides some hundred loads at the hands of the Waziri and Sulaiman Khyl tribes." [2]

In 1878 the Khyber was reopened for trade, in 1892 the Kurram valley came under British administration and became again a road for trade. Shortly afterwards, in

[1] Ib., Discussion, p. 761.
[2] *Moral and Material Progress*, 1873, pp. 113–14.

1894–5, the Central Tochi and Gumal routes were permanently opened to commerce. Since those dates metalled roads and railways have been built, five secure lines of commerce created, and the total value of the trade of the North-West Province alone in 1911 was 2–2¼ million pounds.[1]

The stimulus of railways on road-making has been, and is, very remarkable. Previously no roads were necessary as carting was only done in the dry weather when the soil was baked hard, and the watercourses dried up. In the rains these latter were impassable, and the soil was a sticky morass. With the railways, carting goes on all the year round, with a consequent demand for bridges and metalled roads usable at all times of the year. Work is no longer merely seasonal. Pack animals almost ceased to exist and carts took their place. Mr. J. A. Baines, in his decennial report of 1894, speaks of the marked increase of employment in carting goods to and from the railways in the dead season between the two crops, and the consequent increase of employment and of bullocks.

Perhaps one of the most remarkable effects of the railways was the way in which they attracted English capital to India. The Indian, even if he had capital, would not invest his money; he lent or hoarded it.[2] Lord Dalhousie was anxious to attract British capital, enterprise, and initiative to India. He was, therefore, especially anxious that private persons should undertake the building and working of the railways, under State guarantees if necessary. In his famous minute on the railways, drawn up in 1853,[3] he especially stressed this aspect of railways.

"I submit that any time and money which the Honourable Court could save by undertaking such (railway) works itself would be well expended in securing the introduction at this time of a large amount of English capital and English energy so as to encourage by the successful issue which I contemplate for these railway undertakings, a more extensive employment of similar capital and similar efforts hereafter in connexion with the products and trade of India."

"The commercial and social advantages which India would derive from their establishment are, I truly believe, beyond all present calculation. Great tracts are teeming with

[1] Merk, ib., p. 752.
[2] *Industrial Commission*, pp. 8, 9, 134.
[3] 1852–3, lxxvi.

produce they cannot dispose of. Others are scantily bearing what they would carry in abundance if only it could be conveyed whither it is needed. England is calling aloud for the cotton which India does already produce in some degree, and would produce sufficient in quality and plentiful in quantity if only there were provided the fitting means of conveyance for it, from distant plains to the several ports adapted for its shipment. Every increase of facilities for trade has been attended, as we have seen, with an increased demand for articles of European produce in the most distant markets of India . . . Ships from every part of the world crowd our ports in search of produce which we have, or could obtain, in the interior, but which at present we cannot profitably fetch to them, and new markets are opening to us on this side of the globe under circumstances which defy the foresight of the wisest to estimate their probable value or calculate their future extent."

These were the words of a far-seeing administrator. Nor was he disappointed. Under a Government guarantee of interest, large sums were invested in India by the British public. The very investment of capital, however, needed exports to pay the interest and partly accounts for the excess of Indian exports over imports.

The introduction of railways invariably stimulates engineering, coal mines, the telegraph, and postal communications, and this was also the case in India. Alongside of the railways went the creation of engineering workshops in which some of the Indian peoples were trained to mechanical engineering. Accompanying this went a development of coal mining; the first mine being opened in Raniganj in Bengal in 1854.

The telegraph accompanied and supplemented the railway. The unforeseen obstacles which were encountered have been picturesquely described by Sir E. Arnold, and also give some idea of the difficulties of railway construction.[1]

" He (O'Shaughnessy) had a field for experiment, subject to electric storms and perturbations unknown in Europe, a soil alternately baked into one electrical condition and sodden into another, winds that would lay the telegraph posts in England across the lines from Birmingham to London in a night ; little timber, less iron, no skilled labour, no appliances at starting, and—the white ant. The ground

[1] *Administration of Lord Dalhousie*, p. 245.

which he selected to begin upon on the principle of measuring the difficulty by its maximum was a lake from June to December, and a wilderness of fissured clay from December to June. His posts had to pass through jungles where wild beasts used them for scratching stations, and savages stole them for firewood and rafters for huts. Inquisitive monkeys spoiled the work . . . by dragging the lines into festoons or dangling an ill-conducting tail from wire to wire. Crows, kites, and fishing eagles made roosting-places of the lines in numbers so great as to bring them to the ground; though once or twice a flash of lightning, striking a wet wire, would strew the ground with the carcasses of the feathered trespassers by dozens. The white ant nibbled galleries in the posts, and the porcupine and bandicoot burrowed under them." All the appliances used in England were unsuitable for India, and new ones had to be invented.[1]

Thus the second great factor making for the economic unity of India was evolved.

" Calcutta and Bombay, 1,409 miles distant by railway on the opposite coasts of India, are within a few minutes' speaking distance by wire, and discuss their hourly transactions with each other throughout the day." [2]

The post office communications expanded with low postage rates, and the number of letters and parcels carried rose from barely 19 millions, mainly official, in 1854, to 47 millions in 1860, and 1,293 millions of letters, 78 million newspapers, 12,600,000 parcels, and 71,200,000 packets in 1921.

The railways even affected the forests. The enormous demand of the railways for sleepers led to the creation of a forest conservancy in 1867, lest with the destruction of the forests the climate should suffer still more from insufficient rainfall.

With the growth of trade, towns developed, especially the port towns; it then became necessary to introduce a modern system of sanitation and waterworks.[3] The

[1] To show how those obstacles have been overcome, there were in 1922 411,898 miles of wire and cable, a staff of 14,183, and the value of the out-turn of the workshops connected with the telegraphic system in 1921–2 was Rs. 33,12,520. *Indian Year Book.*

[2] Hunter, op. cit.

[3] Some idea of the urgency for municipal works in the rapidly developing ports may be seen from the following description of Rangoon: " When first occupied by the English it was in a low swamp, under water at every rise of tide. Lands were sold and the proceeds were directed to the purpose of raising the land and laying out streets. The Lands

Commission of 1864 gave the most appalling picture of town insanitation, but reforms soon began and thus the railways by temporarily intensifying the existing evil, caused sanitary engineering works, including waterworks, to be undertaken. Prominent among the Public Works which followed in the wake of the railways were the great harbour constructions undertaken by the municipalities. To keep the port of Calcutta open constant dredging has been necessary.

While the railways were responsible for the development of the coal mines they also helped the development of other minerals such as manganese in the Central Provinces.

After the days of Dalhousie the railways and the telegraphs were rapidly extended, partly for defence and the maintenance of order, and partly for economic reasons. The Orissa famine of 1866 and the famine of 1877 gave an impetus to the spread of railways and irrigation works as an insurance. Everywhere there was a fight between the engineer and the overwhelming forces of nature in India—the mountains of the Deccan were crossed, the rivers were bridged, and water was conserved and distributed on a vast scale. In the fight of Nature and the engineer, the engineer was beginning to win. The engineers created the foundations of the material progress of India, and a transformation was effected in the capacity of the whole country. So important was the engineering side that it became a Government department. It is therefore no exaggeration to call the railways the turning point in both the economic and political history of India.

Railway Construction and Operation

While the railways have helped to transform India the difficulties of construction and operation have been very real. The matter came up for discussion as early as 1844, and it was debated whether any railway could last in India with its hurricanes and floods. The vast bridges necessary to span the rivers would, it was said, be blown

Sale Fund is now exhausted. Meanwhile the town is spreading in every direction and people are settling in swamps in the unreclaimed part. The population of Rangoon is now 100,000, and 400,000 tons of shipping visit its port, yet the only water supply is from unwholesome wells. There is not a single drain except on the surface, and there are no public lamps." *Moral and Material Progress*, 1872–3, p. 6.

away by the tornados or destroyed by the pressure of the flood water, the railways themselves would be submerged and banks washed away, and finally no one would use them on account of the impossibility of mixing the castes. On the other hand, there were the enormous military advantages of moving troops quickly by rail, with the corresponding economic advantage of the maintenance of order, and the economic urgency for better means of transport which existed in every country where commodities had to be transported, was specially strong in India. Animals, as we have seen, can walk, commodities must be carried, and India is a commodity and not a pastoral country.

It was at last decided to build three short railways of a total length of 192 miles, one in each Presidency, to see if railways could exist in India at all. They were opened in 1850, and in 1853 Lord Dalhousie reviewed the whole situation in a famous minute, pointing out the great advantages to India of a railway net. He recommended that a system of trunk lines should be undertaken connecting the interior of each Presidency with its principal port and connecting the several Presidencies with one another. He suggested that they should be built by private companies under a Government guarantee of interest as private capital would not undertake, without a guarantee, the risks of such unknown enterprises and such expensive engineering as would be involved in crossing Central India or surmounting the Ghats. This was the policy finally decided on. It was quite hopeless to expect the Indian peoples to build their own railways at that date. "One of the greatest drawbacks to the advance of the country in material prosperity has been the total dependence upon the Government in which the community has placed itself and its apparent utter helplessness to do anything for itself," was Dalhousie's verdict, and when "the spirit of enterprise still shows so feebly" the terms would obviously have to be made attractive to foreign capitalists if the railways were to be built.

The railways were given land free, there was a guarantee of 5 per cent interest on the capital, and they were to divide with the Government any profit over and above that amount. The contracts ran for 50 to 60 years, and the Government reserved the right to buy out the companies in 25 or 30 years. As Government provided the guarantees, Government kept the control of the railways very much

in its own hands. Dalhousie insisted that they were to be national works over which the State should exercise "a stringent and salutary control". This has been the foundation of all subsequent Indian railway policy. Under this arrangement six great lines—the Great Eastern railway built from Calcutta through the Gangetic plain, the Great Indian Peninsula from Bombay to Delhi, which met the East India railway from Calcutta at other points, the Bombay and Baroda, the Madras, the Sind, Punjab and Delhi, and the East Bengal—were all started with a gauge of $5\frac{1}{2}$ feet.

The standing difficulties of railway building and operating in India were bound up with finance first and foremost. The railways never earned their 5 per cent prior to 1900, and the Government had to make good the deficits. Money was wanted from the Government for other essential public works such as irrigation, it was also wanted for ports and sanitation. To get all these works underway, loans had to be raised and the interest on them paid. As the railways were only one of many competing items for funds in a country where the people were so poor that it was always difficult to raise the taxation to meet the interest, the borrowing for railways alone was bound to be limited. The railway situation was, moreover, always being complicated by floods, famines, and a depreciating rupee. With the droughts, goods that would choke the railways one year would be entirely absent the next, and traffic receipts would suffer accordingly. The rivers when in flood not only held up traffic but swept away miles of embankment. The extraordinary fitfulness of the amount of goods to be carried made it very difficult to organize the traffic.

Thus, the railway history of India is a constant struggle with deficits, a constant struggle to enlarge the railways and to raise the necessary money in England. When the rupee borrowed at 10 to the pound, i.e. at 2*s*., dropped to 1*s*. $0\frac{1}{2}d$., the interest still had to be remitted on the gold basis to the British creditors with an ever heavier drain on the working of the railways. The Indian Government ever strove to drive a finer and closer bargain with the British investor, and then failed to get the money. Its difficulties were somewhat eased after 1900, when the lines began to pay. They were, however, made in some ways more complicated by the fact that the traffic had outgrown the railways,

and demands were made on all sides for more accommodation than the railway administrations could provide. Meanwhile, the rate of interest had gone up. India could no longer borrow at 3 per cent. The list of trustee securities had been enlarged in 1902, and trustees and others aimed at getting larger returns than India "threes". The amounts that could be raised in India itself were small as the habit of investment and banking for the masses had not yet been developed.

Although the railways were yielding a substantial profit to the Government after 1900 they were being starved of their equipment since their finances were bound up with the finances of the Government which was afraid to launch out on new borrowing which might mean new taxation, which was already resented. An alien ruler, as Lord Cromer pointed out, dare not tax heavily.

The tale of Indian railway construction and operation gives the historian the impression of a kaleidoscope. Plan after plan was tried and discarded, and then new complications occurred, the relatively smooth water after 1900 when the deficits ceased was turned into a fresh storm by the war, the rise of wages and prices and the virtual breakdown of the railways, already deficient in their equipment.

Indian railway history may be divided into (1) a period between 1853 and 1869 when the private companies with guarantees held the field. (2) On this there was superimposed in 1869 a system with a new gauge constructed and worked by the State. This lasted till the famine of 1877 made it absolutely necessary to increase the railway system as part of a policy of famine prevention. (3) Private companies with various forms of Government assistance began in consequence to function again after 1879. (4) In 1899 there began the period of rapid development in India, when the stimulating effect of the great public works policy became obvious, and a new and much more vigorous policy of national development was undertaken in all branches of economic life. Railways, too, felt the new impetus. Moreover, they were now financially paying concerns for the first time. They therefore attained to the dignity of a separate department. In 1905 the railway branch of the Public Works Department was abolished, and in its place a Railway Board was set up which was under the Department of Commerce and Industry until 1908, when it became independent.

A Committee—the Mackay Committee—sat in 1907,[1] and recommended an annual expenditure on railways in the future of 12½ million pounds. Those responsible for the finances of India did not, or could not, find the funds for such a large capital outlay, although the sums spent were greater than in any preceding period. The railways were financed from year to year, and as their finance was bound up with the general budget they either got the money or did not get it according to the state of the finances of the Government of India, and its wish to reduce taxation or to provide for other services by dipping into the money that might have been applied to railway development. There was in consequence "an utter failure even to keep abreast of the day to day requirements of the traffic actually in sight and clamouring to be carried." [2]

(5) The breakdown of the railways led to the Acworth Commission in 1921 which recommended the separation of railway finance from that of the vicissitudes of the ordinary budget and another new era has been begun in which the eventual separation of the two budgets has been promised in the near future.

One of the most interesting features in Indian railway history was the transition from private construction and working, to State railways in 1869. It was such an unusual departure for any country at the time, and still more so for a country dominated like England by the *laissez faire* philosophy of the 'sixties. It only shows how India was moulding the Englishman of the time.

Although companies were forthcoming to build the railways on the 5 per cent basis, the progress was so slow that in 1858 the new Government, anxious to have railways for military reasons and to prove its superiority to the old Company, held an inquiry into the reasons for the delay in railway building. In the evidence the difficulties of obtaining any labour, let alone skilled labour which did not exist, is brought out over and over again. "Our ballasting and waggon work is conducted and managed by men who never in their lives before saw a waggon. Our bridges with scarcely an exception are superintended by men who, to use a common expression, do not know a brick from a stone." [3] Another man giving evidence spoke of the lack of good

[1] Report, *Cd.* 4111 (1908).
[2] *Acworth Commission, Cmd.* 1512 (1921), p. 27.
[3] *Report*, 1858, x, § 1856.

inspectors, so that the engineers had to waste time doing what should have been an inspector's job. Brick-making even absorbed the energies of the expensive engineering staff. "We have too often been content to use wretched bricks because we had no one to stand over the workers and see the bricks made who knew how this ought to be done, and it is not desirable that, when determined to introduce a better description of bricks, your engineer should, as I have known to be the case, spend whole nights in brick fields superintending the burning of a kiln, with no bed but coco-nut leaves on which occasionally to rest." [1]

Another complained bitterly of the difficulty of getting material delivered. "No sooner does a boat arrive at any particular village where the boatmen have friends than they simply abandon the boat and materials, and there the materials lie perhaps for months during the whole of the rainy season until the next dry season when we have to re-collect them at great expense; it is scarcely possible to estimate the cost of conveying these heavy materials by the Ganges." [2]

As time went on, native workmen who turned up with bows and arrows to engage in railway construction were duly trained. "We had to select a good, sharp, active, common workman and train him as well as we could . . . Some of them did very well." [3] One witness, however, gave evidence to the effect that it took four natives to do the work of one English navvy,[4] but they were not highly paid. The engineering difficulties were also great. On the Bombay and Baroda line three large and rapid rivers had to be crossed, and between Surat and Bombay eighteen rivers had to be bridged. Along the Ganges valley between Burdwen and the River Soane, a distance of 400 miles, there were said at this date to be no less than 47 million cubic feet of brickwork.

The report summed up the general difficulties as follows:

"The transport across the sea of the vast mass of dead weight necessary for the construction of thousands of miles of ironway, besides locomotives, ironwork for bridges, and other materials, forms a cause of delay second only in importance to the difficulties which impede the conveyance

[1] Ib., Bruce's evidence.
[2] § 612.
[3] § 1536.
[4] § 809, 810. The pay was said to be 10*d.* as against 3*s.* to 3*s.* 6*d.* in England.

of these materials up the country, where the means of internal communication are in many places very imperfect, where river navigation during the dry season is liable to constant interruption, where boats are scarce, and native boatmen untrustworthy. To these difficulties may be added the want, severely felt in many districts, and especially in Bengal, of fuel for lime and brick burning, and of timber suitable for sleepers, large quantities of which are now being supplied from England ; the effects of Indian climate upon European constitutions ; the frequent failure of contractors unaccustomed or incompetent to undertake such extensive works ; and lastly the circuitous and lengthy correspondence carried on between the Railway Boards and their agents, on the one hand, and with the various Government departments both here and in India on the other ; all these appear to your Committee to form sources of delay more or less serious, and must be classed among the main impediments to the rapid progress of railway enterprise in India."

The great expense of constructing the railways under such circumstances and the annual deficits to be made up by the guarantees led to an idea, very remarkable for the 'sixties, that the Government would do better if it constructed and worked the railways itself. The companies were accused of great extravagance. The type of work was said to be too good and substantial, and it was said India could not afford it. The Government had its own staff of engineers in its Public Works Departments, and it decided in future to make and build its own railways, and to buy out the other lines as the contracts fell in. The jubilation of the Indian Public Works Department at this decision is described by one of its members as follows : " We were to have opportunities of showing the companies how to make and work railways cheaply and profitably, and we looked forward to the probability of all the railways eventually becoming State property, and their being carried on by a vast State organization offering attractive vistas of patronage, preferment, and pension." [1]

The Home Government agreed to this, and £2,000,000 was fixed as the maximum amount to be borrowed annually for extending the railway net, the Government constructing and working the lines. A new gauge—the metre gauge—was adopted for cheapness.

[1] *J.R. Soc. Arts*, Bell, " Recent Railway Policy in India," 29th April, 1898.

The new policy was begun in 1869, and as far as construction was concerned the costs were satisfactory, the companies having already solved the initial difficulties. The working was the crux. "We had," says the same authority, "to learn a good deal, and necessarily at the expense of the State and the public, although that consideration did not disturb us as much as it ought to have done. But the evil which State administration of railways then suffered from, as indeed it does still, lay in the constant change of personnel due to claims for preferment in a large service necessitating the movement of officers from important posts to other and distant localities. Added to this was an evil equally fatal in the attempt to control nearly every action of a manager from the headquarters of Government." [1]

During these ten years the mileage of the lines doubled; much of it, however, was on the smaller gauge, and thus there are two standard gauges in India with the inevitable complications that this raises about through traffic. It was intended that the 3ft. $3\frac{3}{8}$ in. gauge lines should be feeder lines, but as India developed, the metre gauge lines constituted in themselves main lines.

As the 25 or 30 years were reached in which the contracts with the guaranteed railways might be terminated, the Government bought out the companies. Some the State worked itself, such as the Sind, Punjab and Delhi (now North Western), and the East Bengal. On the whole, though it acquired the lines, it left them to be managed by the companies. The Government was freed from their detailed management and the working was confided to companies domiciled in England, who from henceforward really acted as agents of the Secretary of State in the raising of capital. These working contracts again were for certain specified terms of years, one of which, the East India, expires in 1924, and the Great Indian Peninsula in 1925.

The famines gave rise to a large scheme for railway building, and with this the Government could not cope, limited as it was to 2 million pounds a year in its railway borrowing. Companies were therefore again introduced in 1879 to work the old State lines, and construct and operate new ones. There were the usual arrangements for free land, Government financial assistance, the division of surplus profits with the Government, and the possible purchase of the lines by the

[1] Ib., *J.R. Soc. Arts*, p. 531.

Government after a certain period. The State confined itself to constructing such lines as were not likely to be immediately profitable or which were required for military purposes. It still retained the right of supervising rates and fares as before. The idea was that the State should be satisfied with the indirect profits of the railway system in increasing wealth and taxation and leave the management to private interests. What the Government actually did was to let the companies borrow the money (it being restricted to the annual 2 million itself) for the Government, the line belonged to the State, and the Company worked it. This created a very important set of famine protective railways, the South Indian railway being one. These new lines were built on the 5 ft. 6 in. gauge. The years 1881–7 showed a far larger annual average of completed mileage than had been previously accomplished, no less than 6,000 miles being built. The fall of the rupee made it very costly to borrow on a sterling basis, and fresh attempts were made to attract capital on a rupee (not sterling) basis without much success.

The policy pursued during this period was one of getting branch lines built by separate companies in which the State either guaranteed a minimum return or undertook that the branch line should receive from the earnings of the main line such a sum, called a rebate, as would make up the total earnings of the branch line to a certain minimum. Up to 1910 only 1,139 miles were made on this rebate system. After that date fresh guarantees were entered into.

A further confusion occurred from the fact that new gauges of 2 and $2\frac{1}{2}$ feet were introduced for feeder branches to the main lines.[1] The general result was that there arose (1) State lines constructed and worked by the State; (2) State lines constructed by companies and worked by the State; (3) State lines worked by companies; (4) Lines constructed with State assistance and worked by companies; (5) Lines constructed and worked by guaranteed companies; (6) Lines owned and constructed by branch companies and worked by the State. Only 1,573 miles were built without some form of State guarantee.

[1] There were in India in 1921—

36,735	miles	of railway.
17,990	were	5 ft. 6 in. gauge.
15,000	,,	metre gauge.
3,000	,,	2 ft. 6 in. gauge.
600	,,	2 ft. gauge.

The actual financial stake of the Indian companies is very slight. "The Government feeling itself to be the real owner and ultimately responsible not only financially but morally and politically for the policy pursued, has always refused to leave any real initiative in their hands. And as by the interposition of the companies, the Government is kept apart from direct management, it in its turn does not feel an obligation to undertake the initiative itself." [1]

"It will thus be seen that the railway financial policy of the Government of India has been a constant see-saw, that their best intentions have been frustrated at one time by famine, at another time by war, at another time again by currency difficulties, at another time by political considerations, and at all times by the state of the money market." [2]

In 1908 a very energetic programme was laid down for railway extension by the Mackay Committee, but the constant succession of complaints of inadequacy showed that the system was not meeting the requirements of the country. These difficulties became enormously accentuated during and after the War. The coal trade was held up, consequently the iron and steel works were held up, building materials became costly, extensions of plant could not be undertaken, seven large jute mills employing 40,000 workers were stopped in 1921 owing to lack of coal. Seven hundred tons of linseed could not be transported for four months, and lost the market which was filled by linseed from Argentina; neither salt nor sugar could be distributed, and at one station there were 70,000 tons of manganese accumulated which was only sent on at the rate of 3,000 tons a month, and which seemed likely to take two years to move at this pace. Hides, cotton piece goods, raw cotton, cotton seed for sowing were all delayed, and some of them deteriorated owing to being left in the open in the rains for want of railway transport. Railways even shut down for ten days together. Cotton bought in December, 1917, did not reach Nagpur till July, 1918. Indeed raw cotton was in one place transferred by camels moving parallel with the railway, which could not take the cotton. Grain rotted at the station and became unfit for consumption. Collection of metal for road repair was delayed, and the trade in timber and bamboos was hampered. Bitter complaints arose from

[1] *Acworth Commission*, p. 65.

[2] *J.R. Soc. Arts*, Priestley (Manager Southern Indian Railways), 31st May, 1912, p. 697.

the third-class travellers, who provided the bulk of the passenger revenue, as to the overcrowding and want of sanitation and water on journeys. The commercial progress of India had outgrown its railways.

Indeed, if one wanted to get an adequate idea of what the railways have meant to India, one has only to read the list of complaints quoted in the Acworth Commission to see how the whole country had come to depend on railway transport.

The Acworth Commission considered that the breakdown was due largely to the methods of railway finance adopted by the Government of India. "Now it is the prime duty of the Indian Chancellor of the Exchequer, the Finance Member of Council, to balance his budget. In times of bad harvests and bad trade receipts fall off. The Finance Member is constrained to economize. He cannot reduce the army or the civil services wholesale at short notice. Nor can he refuse to pay railway wages or to provide currently consumable stores. He can, and does, curtail his appropriation to railways for renewals and betterment works. And he cuts down still more drastically expenditure on new works and extensions, even though they be in process of execution."[1]

"The effect of this policy of inadequate allotments, varying irregularly up and down from year to year, would have been bad enough in any case, but it is made worse when, as not infrequently happens, the allotment is suddenly cut down during the currency of the year to which it relates, and works in progress are suspended, staff are disbanded at a moment's notice, and materials are left lying on the ground for an indefinite period. An almost equally bad effect is produced when later on in the year, the general financial position having unexpectedly improved, the Finance Minister with equal suddenness lifts his hand and encourages the railways to spend more freely. . . . In eager haste the railway officials start to spend with inadequate staff, and hurriedly collected materials," lest the money should lapse with the expiration of the financial year.

"There are scores of bridges with girders unfit to carry train loads up to modern requirements; there are many miles of rails, hundreds of engines, and thousands of wagons whose rightful date for renewal is long overpast. . . . the Government has formed no replacement reserve."[2]

[1] p. 21. [2] Ib., p. 30.

"In our judgment a financial system which produces these results stands self-condemned," was the verdict of the Committee.

India hardly produced any of her railway supplies, and when cut off by the War the situation became serious. Maintenance and renewals fell into arrear. The money under-spent on railways during the War was spent in other ways. The War being over there was no money for renewals on the grand scale as India already had serious deficits in the budget. Hence the crisis.

The Committee were unanimous in their opinion that the railways had been starved in the past and recommended that the railway budget should be kept separate from the ordinary budget in future, and that railway expenditure should be provided for over a long period and not from year to year. On the question as to whether the railways should be managed by the State or by companies domiciled in India they differed. They unanimously rejected the idea of management by companies domiciled in England.

One group of Commissioners considered even that the system of company management as carried out in India had little to recommend it, Government control being at once too strict and too futile.

"A system seems to have little to recommend it under which on the one hand a progressive company is hampered by meticulous government control of every detail of expenditure, while on the other hand the utmost wisdom on the part of the Government cannot prevent the injury caused by the unwise and unprogressive policy of a company's board, at once to the revenues of the State and to the economic development of the country." [1]

In 1921, of the 36,735 route miles of railways in India, 7,369 miles were owned and worked by the State, and 17,768 also owned by the State were worked by companies.

The aggregate annual loss up to the end of last century was £57,527,307. Between 1900 and 1918–19, a profit of £44,742,276 was made, so that the net loss was only £6,785,031. The amount paid in guaranteed interest between 1858 and 1918–19, was £208,344,015, and the net receipts were £156,816,708.[2]

[1] Ib., p. 66.

[2] Acworth Commission, Appendix 3, p. 99. The railways of course paid in the increased prosperity of the country, and its consequent higher taxable capacity. See Acworth Commission on pp. 28-9 for increased value of land and land revenue.

A Committee was appointed to see how the recommendations of the Acworth Commission could be effected. It reported to the Indian Legislature that it was impossible under the abnormal financial circumstances of the budget deficits to separate railway from ordinary finance, but recommended that the question be re-examined in three years.[1] Estimates of expenditure were, however, prepared on a five-year basis; a chief Commissioner of railways was appointed in 1922 with power to override the Board and it was decided to work the two railways—the East India and Great Indian Peninsula—by the State when they fell in in 1924 and in 1925. Something is being done to remove the grievances of the third-class passengers, the services are being gradually Indianized, and extensive schemes for the training of Indian mechanical engineers are in operation,[2] and schemes for the training of railway traffic staff are under consideration. In 1923 it was decided to separate the railway and the financial budgets.

In spite of all this experimentation and financial difficulties railway construction had, nevertheless, in 1921, as much as 36,735 miles of railway to its credit. In a country of 1,773,168 square miles with a population of approximately 320 millions, this was inadequate for the size of the country and the population. Nevertheless, the figures meant a considerable advance on a roadless, railless, India.[3]

The Famines, Famine Relief, and Irrigation Works

The need to keep law and order led, as we have seen, to a more rapid development of railways after 1857, but the importance of railways became greatly accentuated by their utility in helping to relieve famines. Indeed, they changed the whole nature of famine relief. It is difficult to over-estimate the stimulus to the development of public works and general improvement given by the desire to combat famines, especially after 1877. It led, as we have already seen, to a rapid extension of railways whether they paid commercially

[1] There was a deficit on the railways in 1921–2 for the first time since 1900.

[2] *Moral and Material Progress*, 1923, pp. 178–86. The numbers employed on the railways in 1922 were 754,478: Indians 735,789, Anglo-Indians 11,831, Europeans 6,858. In the last ten years the number of Europeans has fallen from 7,850 to 6,858, and the number of Indians has risen by 165,000. *Indian Year Book*, p. 256.

[3] On present situation of railways in India, W. T. Stephenson, Communications, p. 95 (*Resources of the Empire Series*).

or no, it led to a great increase of irrigation and water storage. So important was famine relief that an annual sum was set aside by the Finance Minister every year after 1878, to form a fund for this purpose. The famines also necessitated adjustments in the land revenue, and led finally to an attempt to improve agricultural methods by scientific research so that the yields might be greater. The general condition of the labourers and cultivators was also taken seriously into consideration so that they might be enabled to develop a better " staying power " in times of dearth. In a land of small uneconomic holdings, where over 226 millions depend on agriculture, and where the majority live a hand to mouth existence with no capital, and where credit ceases to exist when the rains fail, the problem is enormous. A million acres may almost suddenly fail to yield a blade of grass for man or beast. In addition, the authorities have had to deal with a people " to whom the mere prospect of escape from starvation was an insufficient attraction ", if the work offered were distasteful.[1] Famine relief was improvised almost suddenly on a vast scale, for millions of people needed a great organization, and a great organization needed information to go upon, and there was a further stimulus to the collection of accurate information about crops, soils, and agriculture in general.

The tendency of tenants to fall into the hands of money-lenders during a famine produced a series of laws for their protection and led to the encouragement of co-operative credit societies. They were also encouraged because they put heart into the people, and created moral stamina. The functions of government were thus considerably extended by famines.

There was a series of measures undertaken for famine prevention such as railway extension and irrigation works. Some of these latter paid and were classed as productive, but a large number of tanks and minor works were provided which were merely protective, i.e. designed to be a reserve in case of emergency, and these were not infrequently unremunerative. Then, finally, there was developed what one might call the long view in famine prevention, viz. the raising of the standard of life of the cultivator and labourer, so that they could resist the shock of famine. This included the raising of the standard of agricultural methods. Not

[1] *Famine Report, Central Provinces*, 1898, vol. i, p. 159.

merely agriculture but industry was also involved. The security of the people would be greater, so it was thought, if the industrial development was greater. There would then be an alternate employment. The factories and mines would absorb the growing population and tend to lessen the pressure on the land. Hence, the famines had the effect of making the Government more willing to encourage, and even initiate, industrial enterprises.

The very increase of population under British security tended to aggravate the effects of dearth not merely by the sheer weight of extra numbers but by the subdivision of land among more people, making economic cultivation of the scattered plots far more difficult. Population was probably 100 millions in Akbar's reign,[1] in 1865 it was estimated to have become about 150 millions, in 1871 the census showed 185 millions, and it is now 319 millions.

Thus, while on the one hand the loss, mortality, and recurrence of famines tended to be limited by the preventive and relief measures, on the other hand the increase of population worked in the other direction and complicated the methods of relief by the immense numbers to be dealt with in times of emergency. Six million people were relieved in the famine of 1899.

Famines have been regarded as beneficent agencies by some persons because they reduce the population. India seems to illustrate the theories of Malthus as to the increase of population up to the margin of subsistence when unchecked by war, pestilence, or famine. Famine, therefore, from the Malthusian point of view, acts as a beneficent check. The British Government has never accepted this view. Its declared intention is to save life and it does save life on an enormous scale. A certain type of critic has, however, arisen who has alleged that famines were non-existent in the palmy days of native rulers, and that they are a special scourge introduced by the British. Others, not quite so ignorant of the common facts of history, allege that the famines have been worse under British rule owing to excessive taxation which leaves the cultivator no margin or reserve. When the authority that levied the tax, or the man who collected rent, took their allotted share of the village grain heap, then, if there was a scarcity, the shares were automatically diminished. Under the English system taxes

[1] Moreland, *India at the Death of Akbar*, p. 22.

and rent were paid in money and were fixed in amount, and the system was too rigid to allow of much reduction in bad years, and the land-tax, so it was said, pressed unduly at such times.

Another reason given for the alleged increased magnitude of these disasters was the new value given to property under the peace and security of British rule. It was now easily transferred because it was worth buying, the cultivator became enmeshed in mortgages and was soon reduced to the position of a landless man, and he thus became an easier prey to famine.

While contributory causes of famines are due to the increase of population and subdivision of land into fragments in consequence, added to the fact that the peasant has never learned the habit of saving against a bad year owing to the state of chronic insecurity under which he lived, the fundamental cause of famines is the weather. Roughly speaking there seems to be a famine in some area or other every five years, while really bad and widespread scarcities, sometimes lasting for several years, seem to occur about the middle and end of each century.[1]

It may be taken as proved conclusively that famines have always been part of the normal life of India—some of them lasted several years, many were followed by pestilence which increased the mortality. The majority were caused by the failure of rain, others by excessive rain,[2] others by locusts,[3] while war and pillage contributed to produce famine conditions over the area in which the combatants fought.

Stocks of grain were usually kept in pits in reserve. When these were exhausted, as they certainly would be in a two years' famine, there was nothing for it but death or migration. Masses of people wandered out of their villages with their cattle and died by the way. People sold themselves as slaves, and cannibalism was not infrequent. A witness who remembered one of the old famines told Colonel Etheridge, who in 1860 was collecting evidence about

[1] Loveday, *Indian Famines*, p. 25.

[2] 1630, 1676–7, 1770, 1776, 1783, 1866, and 1906–7.

[3] 1650, 1787, 1812, 1833–4. "The enormous advance made in the treatment of famine in India in a comparatively brief period can only be apprehended by one who, in 1876, rode across Mysore when clouds of locusts obliterated the fields, the roads, the high upstanding rocks, and all the features of that pleasant land, covering inanimate nature and the victims of famine alike with one monotonous pall." *J.R. Soc. Arts*, J. D. Rees, "Madras," 1901, p. 475.

previous famines, that " it makes me tremble even at this day to think what happened : grain selling at a rupee a pound, and girls selling at 8 annas apiece, villages depopulated, fathers eating their own children. Charitable people opened cheap grain shops, but the weak were not allowed to profit by them, being elbowed out and trampled down by the stronger ".[1]

The history of famines under British rule divides itself at the famine of 1877. For over a hundred years from the great Bengal famine of 1770, most of the attempts to relieve the famines were attended with scanty success. The East India Company did not know what to do, it had not got the knowledge of local conditions, the organization or the officials to fight famines as they are fought now on the scale of a great campaign. It did distribute charitable relief, prohibited the export of grain, and tried to secure more grain by importing it itself, but the difficulties of transport were very great and the loss of life in consequence was heavy.[2]

The first time the Government really tried to organize famine relief on the grand scale was on the occasion of the Orissa famine of 1866. The dividing line comes, however, in 1877 because by that time the railway net was considerably developed, and after that date the difficulty was not to provide food enough but to organize relief work so that people should be able to buy food. In 1883 the Famine Codes were drawn up. After every succeeding famine an inquiry has been held and the fresh knowledge gained has been pooled, new measures have been evolved, and recovery after famine facilitated. A science of famine relief has emerged. The mortality that still inevitably occurs is partly due to the epidemics that follow famine, especially cholera, which is apt to work havoc with an enfeebled people, or it is due to the nervous collapse which accompanies a

[1] Quoted Sir F. Lely, " The Practical Side of Famine in India," *J.R. Soc. Arts*, 1st March, 1907, p. 421.

[2] The famines under English rule before 1877 were : 1770 Bengal, 1781 Madras, 1782 Bombay and Madras, 1783 Bengal and Central Provinces, 1787 S. Mahratta country, 1790–2 Bombay, Hyderabad and Gujarat, N. Madras, Orissa, 1799–1804 N.-West Provinces, Bombay, Central India, and Rajputana, 1806–7 Carnatic, 1812 Bombay, Agra, and Madras, 1819–20 N.-West Provinces, Rajputana, Deccan, Broach, 1820–2 Upper Sind, 1824–5 Deccan, Bombay, and Madras, 1832–3 Sholapur, N. Madras, 1833–4 Gujarat, N. Deccan, and parts N.W. Provinces, 1853–5 S. Madras, Deccan, part of Bombay, Rajputana, 1860–1 parts of N.W. Provinces, Punjab, Rajputana, 1862 Deccan, 1866–7 Orissa, Bihar, 1868–70 N.W. Provinces, Punjab, Gujarat, Deccan, Central Provinces, Rajputana, 1873–4 Bihar. Loveday, *Indian Famines*, pp. 137–8.

scarcity when people lose heart and die from want of energy to live.

One's imagination boggles at the vast task of famine organization on the modern scale. Almost suddenly millions of people varying in their capacity, castes, habits, age, sex, health, and social standing have to be provided with work or sustenance. There are the shy forest tribes who cannot be persuaded to come in for help at all, there are the parasitic type who are only too eager to be helped, there are the proud, the shiftless, and the loafers, the woman who is purdah and cannot come out, and has to be sought out. Perhaps a greater problem than the variety of the peoples to be dealt with was due to the fact that in most cases their vitality was so impaired that they surrendered themselves quite easily to death. Not the least of the difficulties of famine relief is the provision of water for drinking, and that cannot be conveyed or imported as easily as food.

Then there are the cattle which are nearly as important as the people, since on them depend the future livelihood of the people after the famine. The cattle must be kept alive for well work and irrigation, for transport purposes, for ploughing and for milk, and yet the quantities of fodder they need is so great in bulk that it is more difficult to provide fodder than grain for human beings.

The importance the people themselves attach to the cattle may be judged from the following description by Sir Frederick Lely, who was in charge of the famine relief in Gujarat in 1899. " It was pitiful to see the frantic efforts of the poor folk to save their cattle. They searched about in the corners and on the waysides for straws and sticks—anything that could be masticated. They tore the thatch from the roofs of their houses. They climbed the trees and picked off the leaves one by one so that to the brown fields, hungry vagrants, and wandering cattle was added yet another presage of mighty famine, viz. lines and groves of skeleton trees stripped of their green foliage." A new disease, *trefal*, was in consequence scheduled by Indian clerks as a cause of death, i.e. falling from trees.

" There were roughly (in Gujarat) two million head of cattle with practically not a blade of grass nor a wisp of hay to feed them on." [1]

[1] " Practical Side of Famine," *J.R. Soc. Arts*, 1907, p. 414.

The first problem in the matter of famine relief was always the provision and distribution of food. This was the great difficulty in the days before 1877, and the creation of the widespread railway net. When obtained, however, the starving people will not always eat the food. Indian peoples are peculiarly sensitive to any change in diet and can detect a difference in varieties of rice that are not perceptible to Europeans. Rice-eating peoples will not merely reject other rice than that to which they are accustomed but cannot be persuaded to eat wheat. Then there is the question whether it is better to leave it to private traders to supply the grain required or whether the Government should buy the food either at home or abroad. It is now generally accepted that it is better to leave the matter to private traders as Government purchase or importation creates such a dislocation of the grain trade that it ceases to function, and the Government cannot improvise a successful distribution in its place.

Famine relief also raised the question of the prevention of the export of grain. This became a party cry, and Indian agitators pictured streams of grain flowing out of the country while people were starving. The average amount of food grains and pulse exported in the ten years ending 1918 was small in proportion to the total production of the country, being 1·5 million tons annually out of a total of eighty million tons grown.[1] In a famine year the export almost ceases, as prices rise in the country itself, and it pays to divert the export for home consumption. However, the outcry against export was so strong that in 1919 it was prohibited as a matter of politics, except by licence. The reluctance of the Government to interfere with the export was due to the fact that if the cultivator could not be sure of disposing of his surplus he might cease to produce one, or he might take to growing cotton or some other non-food crop, and it was therefore considered advisable to interfere as little as possible with the sale of his surplus.

The distribution of food affects the whole organization of the railway traffic. Normally, the main traffic is to the ports, and as the bulk exported is greater than the bulk imported the wagons return partly empty. In famine times, when grain is imported, the wagons return full, and this favourably affects the earnings of the railway. Much

[1] *Moral and Material Progress*, 1922, p. 196.

of railway traffic has to be diverted to the famine areas, i.e. wheat which would normally go from the Punjab to Karachi will be diverted to the United Provinces and there is thus a cross working of the normal lines of traffic. On the whole, a famine is a prosperous time for the railway administrations owing to the essential part they play in the distribution of food.

The principles of famine relief are firstly that no able-bodied person shall get food except for work, and that no one shall die of want. The organization of the relief works for the able-bodied raises many problems. Shall there be large centralized works or small local ones ? If the works are local how can grain, water, and fuel be provided to so many centres ? If the system of large centralized works be adopted there is the problem of the sanitary measures to be taken for large numbers of people. There is the further difficulty of finding useful work for them do do. Tank building, embankment building, road-making, and stone-breaking are not suitable, for instance, to weavers who lose the delicacy of touch essential to their trade, or to herdsmen who are quite unaccustomed to manual work. Of these latter Sir. F. Lely said : " Every family of them was, before the famine came, the owner of perhaps a hundred head of cattle—some more, some less—and earned an easy and leisurely living by making butter and breeding stock. Some of the male folk had taken the animals and gone off in the vague hope of finding a land of plenty, but no word had come from them, and the chances were that neither man nor beast would ever return. Those who remained behind, having spent all, were driven to break up their homes and come to relief works. They had never done a day's manual labour in their lives, and their blistered hands and hopeless, yet patient, faces could not but evoke pity. It was only their splendid constitutions, built up in the fresh air and on nourishing food, that saved them from dying, as so many did, from the mere shock." [1] This description enables the ordinary Englishman to realize something of the anguish of famine.

Then there is the question of payment for the work done. What standard shall be adopted ? Shall it be just enough to sustain life, or to give comforts as well ? Shall it be time work or piece work ?

[1] p. 419.

Then there is the further question of relieving those who are not strong enough to work, those who are socially unable to go to the relief works, and those who have too little initiative to do so, or primitive tribes that bolt into their huts like rabbits at the sight of a white man. There is in addition the problem of the shirkers and the wanderers.

For those who are feeble relief has to be suddenly improvised in poor houses, as there is no system of poor relief in India. Here, some light task is generally provided, such as opening the prickly pear and removing the skin—the pulp being given to the cattle. Then there is an organization for seeking out people in their homes and bringing them in. Wandering is restricted as far as possible.

It must, however, be remembered that the joint family is the centre of Indian life, and the relief organization means the temporary break-up of this unit. Therefore, there is a strong trend of opinion in favour of as much decentralization as possible and of local relief, which shall keep the family intact. "I doubt if we entirely realize the distress of the people at having to leave their roof tree or their village. It was said to lead to immorality. It certainly disrupted family life. . . . On the other hand a fair and honest distribution of relief, whether in food or in cash to those helpless people in their own homes, scattered in thousands of villages, would have been far beyond the powers of a limited staff. There would have been negligence, favouritism and peculation, and the whole machine would have got out of hand. Not only so, but it was found by experience that if families were allowed to stay at home, the fathers and elder brothers stayed also, preferring to half starve on a share of wheat the others got rather than go and do a hard day's work for themselves." [1]

The policy of takavi loans is intended to foster local relief. These are Government loans advanced to local landowners for improvement. If with these loans they will undertake some work of improving their land which employs labour, it solves the question of supervision, useful work and local work which keeps the family together.

Then there is the question of restarting agricultural life after the famine is over. Men must return to plough but how can they live till the crops are harvested? How can men plough when the cattle have died? After the famine in

[1] Ib., p. 418.

Gujarat in 1897, Sir F. Lely relates that a plough capable of being worked by a man was devised by Mr. Mollison. In this case the Government supplied cattle from other parts of India and made large loans for the purchase of cattle. A Government farm was also started to provide animals for re-stocking. Seed has also to be distributed to enable the cultivators to make a fresh start, or alternatively loans provided for the purpose.

In the end there is the question of paying for famine relief. The actual cost of famine relief has run into millions. This meant before 1878 that a loan had to be raised, and that a poverty-stricken people had to pay more taxes to meet the interest on the loans. The burden might become so heavy that it might conceivably be better to let people die without relief, than hang a millstone round the neck of future generations.

There has always been, then, a struggle to keep the balance between adequate relief and economy in relief. If the relief is not prompt and adequate, then people become emaciated, they cannot work and they easily succumb. For one grim axiom that the English have learned is that " In the administration of famine relief there is no room for atonement. If people are allowed to run down there is no getting them up again ".[1]

It has been proved over and over again that the truest economy is to be prompt and generous with the relief. Yet if the relief be too lavish there is demoralization. Each famine relief operation has needed incessant care and watchfulness to set the scheme working neither too early nor too late, and to see that people are not underfed and at the same time that the relief is not abused. " So many cubic feet might be a fair task so long as the digging was in sandy soil, but if it passed into stiffer soil without being noticed by the official in charge, and the same quantity was still exacted, the worker was overtaxed and began to run down. If wages were not paid punctually he might have to go without his food or he got it on credit, which meant that he got less. Or if prices in the local market went up or down and the rate of wages was not promptly raised or lowered accordingly he got less or more than he needed." [2]

The business of the Famine Officer " was to ride about everywhere and keep his eyes open. If he found people

[1] Sir F. Lely, op. cit., p. 417*b*.

[2] Ib., p. 417.

starving at home or on the roadside he was to find out why they did not go to the Government work. Was the fault in themselves or in the work ? If the people on a work looked feeble and running down, if the numbers on a work dwindled, if the people flocked to one more than to another, he was to find out the reason. If a large proportion of the workers failed to do the daily task, and consequently did not earn the full wage, why was it ? Was the task too heavy for the average person, or did any negligence of the staff prevent their beginning in good time, or were the people only playing with the work, not being in real need of it ? If he found men and women on a work so sick or weak that they ought to be in hospital, if relations and friends instead of being grouped together were harshly separated, if newcomers were not promptly taken on, if the food in the shops was bad or over-charged, he was to interfere at once and set things right. . . . The depressing surroundings, the exhausting nature of rigid and unaccustomed toil, the monotony and inferiority of famine diet, all prevent the recovery of tone when once lost ; and the only way of bringing a population through a famine with success is to keep up from the beginning their courage and vitality and never to let them lose heart ".[1] This proves how in spite of the perfection of the machinery or organization, the personal element must always tell. A famine campaign can no more be run on the mere famine codes than a battle can be fought on the instructions in a military manual. Successful famine relief does not begin and end with a low expenditure and low bills of mortality. Fighting famine welds Englishmen and Indians together " in a fire of common trouble and a common task ".[2]

Although the Famine Codes were drawn up in 1880 they were based on previous experience of twenty years. The year 1860 saw a big famine in which it was decided to leave the provision of the grain to merchants, to enforce work, to provide light tasks in a poor house, and to give the old assistance in their homes. These were the evolution of modern principles, but the difficulty lay in their execution. The Orissa famine of 1866 was a terrible one to deal with, as floods prevented communications. Relief operations began

[1] p. 417. Lord Curzon, speaking after the paper had been read, said that what struck him when going over the relief works when he was Viceroy was the absence of emaciation and the " astonishingly good condition " of the people at work. p. 422*b*.

[2] Ib., p. 421.

too late after the resisting power of the people had weakened. In spite of the 14½ million rupees expended, about a quarter of the population of Orissa died.[1] In the famine of 1868 the Government determined that there should be no loss of life, and provided lavishly for relief. People flocked in from the native state of Rajputana, one million of the 1½ million inhabitants of Marwar left the region and so great was the demand, that relief works and poor houses broke down. Money was not grudged, 6½ million pounds was spent on relief, and the area affected was not large nor the numbers great. It was clear that the Government had no information about crops and supplies to work on, and it was left with 100,000 tons of rice on its hands which had been imported on its behalf. In 1873–4 there was a famine in Bihar. Here again the absence of knowledge both of crops and social conditions made itself felt. The famine brought out the necessity for more information. In 1877 South India, the United Provinces, and part of the Punjab were affected, i.e. an area of 257,000 square miles, and 58½ million people. The Government decided not to import corn but to leave the task to private traders, and it was found that these would not supply the outlying districts. An attempt was made to provide for 400,000 people in small decentralized works, and as this proved impossible, larger works were undertaken. The difficulty was that such vast schemes of relief had to be improvised just at a time when things were in disorder. Although 700 million units[2] were relieved, the mortality was 5¼ million, and the cost 8½ crores of rupees.[3]

The effect of this famine was twofold. In the first place a fund of £1,000,000 sterling was definitely laid aside every year after 1878 by the Government of India for famine insurance. The necessity of being ready to cope with a famine was also recognized. A commission was set up in 1880 to elaborate a famine code, which was issued in 1883. The rules laid down were that there should be employment for the able-bodied, on a wage sufficient for support, that there should be gratuitous relief provided in poor houses, that the food supply should be left to private agencies, and that the landowning classes should be helped by loans and a suspension of the land revenue claims.

The next big famine came in 1896–7, although local

[1] Loveday, *Indian Famines*, p. 51 ff.
[2] A unit is one person fed for one day.
[3] *Indian Year Book*, 1923, "Famines."

scarcities had occurred in 1889, and in Bombay in 1890. It affected 307,000 square miles, and involved a population of 69½ millions. It was one of the most extensive failures of the crops of which history makes mention. In the Central Provinces it followed, for instance, on three harvests partially ruined by wet. In many parts the resisting power of the people was found to be very low, possibly owing to the rise of prices which had not been followed by a rise of wages. The number of people demanding relief was unprecedented. The loss of food crops was estimated to be 18 or 19 million tons.[1] The cost was 7¼ crores, the revenue remitted was 1¼ crores, and loans to the extent of 1¾ crores were granted. In addition, charitable relief by private persons furnished 1½ crores.[2] The Commission of 1898 reported that "the success actually attained in the relief of distress and the saving of human life was, if not complete, far greater than any that has been recorded in famines that are at all comparable with it in extent, severity and duration", and that the cost was remarkable for its moderation.[3] While three-quarters of a million succumbed, this number was small in comparison with the extent of the famine, and the proportion of deaths on previous occasions.[4] The administrative efficiency necessary for the relief of some 76,601,544 units at a cost of Rs. 32·7 per head per annum is not easy to realize.[4] The difficulty about the relief works on this occasion was that the amount of work to be done on railway and tank construction had diminished with the previous extension of public works.

Before recovery could really take place, a second famine of unparalleled severity occurred. The deficiency of rain was actually double that of any known record. 475,000 square miles were affected and 59½ million people. The loss in food crops alone was estimated at 50 millions sterling, to say nothing of cattle.[5] The feature of this famine was the unparalleled and unexpected numbers who flocked to the relief works. The railways carried 2½ million tons of grain to the famine districts but could not manage the fodder, and the loss of cattle was stupendous. Great generosity was

[1] *Moral and Material Progress*, 1903, p. 326.
[2] *I.Y.B.*
[3] Quoted Loveday, p. 66.
[4] Loveday, p. 70.
[5] *Moral and Material Progress*, 1903, p. 326. "No consideration of expense was allowed to stand in the way of such measure of relief as was needed."

shown because that was proved to be an ultimate economy and no less than 1,140,000,000 units were relieved, a number far in excess of any previous occasion. For weeks together, over 6 million people were in receipt of relief. As on the previous occasion the utility of the work actually accomplished was doubtful. For instance, in Madras roads were constructed which in the then state of the revenue were impossible to keep up. Plans were not ready nor were there tools enough for the workers. This famine was remarkable for evolving the doctrine of putting heart into the people, and for introducing payment by result. The necessity of saving cattle as well as people soon became obvious. In 1896–7 and 1897–8 the total expenditure on relief exceeded five million, in 1899–1900 and 1900–1 it exceeded six million pounds sterling, besides liberal advances made to agriculturists, loans to Native States, whose finances could not meet the cost and large remissions of revenue.[1] It was interesting to notice that in both these famines India was able to feed herself, with the importation of rice from Burma, and that the Administration expected that she would be able to continue to do so as long as the railways existed to deal with the vast masses of food that had to be transferred.[2]

[1] *Moral and Material Progress*, 1903, p. 326.

[2] The following account gives some idea of the masses of foodstuffs which the railways had to transfer either from the ports inland or from one part of India to another: "Excluding the Punjab, which was able to meet its wants from its own resources, the provinces affected by famine or scarcity imported during the twelve months ending September, 1900, food, grains, and pulses to the extent of nearly 72 million maunds, instead of exporting, as they would have done in an ordinary year, about 7 million maunds. The largest importer, as might have been expected, was the Bombay Presidency, which took over 30 million maunds, of which about 17 million were obtained through the chief seaport, 5 million from the North-Western Provinces and Oudh, 4 million from Madras, and nearly a million each from Bengal, the Punjab, and Mysore.

"The next largest importers were the Native States of Rajputana and Central India, with over 23 million maunds, of which 17 million were derived from the North-West Provinces and Oudh, 3 million from the Punjab, 2 millions from Bengal, and about a million through the port of Bombay. The depletion of stocks in the Central Provinces is shown by a net importation of nearly 12 million maunds, of which no less than 11 millions were imported from Bengal and its chief seaport Calcutta, the balance being obtained from chiefly the North-Western Provinces and Oudh. Berar imported nearly 4 million maunds, almost the whole of which was drawn from Bengal and Calcutta. Into the Nizam's territory there was a net importation by rail of about 2½ million maunds derived almost exclusively from Madras and its seaports. . . . The imports into the Central Province and the Bombay Presidency consisted largely of Burma rice imported through Bengal and the port of Bombay." *Moral and Material Progress*, 1903, pp. 327–8.

It was after these two famines that a violent attack was made on the British Administration as the cause of famines, and the system of land revenue collection in particular.[1] From this famine onwards " moral strategy " was relied on, i.e. the creation of a spirit of self-reliance and resistance. The idea of decentralization in relief works and smaller undertakings seemed to find favour. The method of procedure in modern times is as follows: " Standing preparations are made on a large scale in ordinary times, programmes of suitable relief works are maintained in each district, and the country is mapped out into relief circles of convenient size. When the rains fail, preliminary inquiries are started, and a careful look-out is kept for the recognized danger signals of approaching distress. As the uneasiness is intensified the Government makes the necessary financial arrangements and declares its general policy and ' test works ' are started. A test work is a work employing unskilled labour, usually earth-work; the conditions are strict, but not unduly repellent. When the test works or village inspection disclose real distress relief works are opened, the lists of persons entitled to gratuitous relief are revised and the distribution of gratuitous relief begins. Distress usually reaches its maximum in May. Policy changes somewhat with the advent of the rains. Relief works are generally closed and there is an extension of local gratuitous relief. The people are moved to small works near their villages and liberal advances are made to the agriculturists for the purchase of plough, cattle, and seed. Gradually the remaining relief works are closed and gratuitous relief is discontinued, and by the middle of October famine is ordinarily at an end."

" As the administration has been freed from the primary necessity of finding food, the relief system has become increasingly elastic. Relief works are organized with due regard to the feelings of the people. Those who cannot work are relieved as a rule in their villages, and children and weakly persons are specially treated. An elaborate scheme for making relief acceptable to forest and hill tribes has been worked out; and weavers and artisans who formerly suffered on ordinary relief works are now as far as possible relieved in their own trades." [2]

[1] For the complete justification of the Government, see *East India (Land Revenue) Cd.* 1089, 1902.

[2] *Moral and Material Progress*, Fifth decennial Report, 1913, p. 235.

In 1907–8 the scarcity in the United Provinces was easily met. Never was there less loss and suffering. Takavi loans were freely given, but the resisting power of the people themselves had improved. Although a population of fifty millions was affected, and the food supply failed for nine months, the numbers on relief works were abnormally small. The large numbers relieved in their villages was the great feature as well as the special provision for weavers, who were relieved to the number of 15,000.

This famine, that in Bombay and Gujarat in 1911, and the famines in the United Provinces of 1913–14 and 1918 all show the same features. Of the 1918 famine it was said that " the rains failed more seriously over a wider area than during any monsoon in the recent history of India. The deficiency in the rainfall was more marked than in the great famine of 1899 ".[1] On the part of the Government there was a state of preparedness. Plans were ready for provincial works, and even stores of tools were kept against an emergency. The greater mobility of the labourer helped in each case to relieve the situation, and the shock to the social life of the community was in each case insignificant. The labourer girded up his loins and sought employment in industrial or public works.[2] Wages had risen and had helped to give a larger resisting power, and " self-help " was prominent. Co-operative societies started in 1903 also worked in the direction of imparting moral strength as well as in the direction of cheaper credit and the encouragement of savings.[3] The great extension of irrigation works after 1900 no doubt helped in the areas they commanded, and tended to raise the condition of the people and prevent debilitation. The Government had frequently tried to assist

[1] *Indian Year Book*, 1923, p. 499.

[2] Speaking of the rise of wages in the Central Provinces, the writer of the decennial report on the Progress of India said in 1913 : " When it is considered how much more freely labour moves at present than was once the case, how during the famine in 1897 villagers lay starving in their homes a mile or two from a relief work, while to-day labourers from Chattisgarh are to be found on the railways of Bengal and Assam, it is perhaps remarkable that wages have not risen even higher." 220, p. 401. In Bengal, Bihar, and Orissa the same thing is noticeable. In 1908 no less than 50,000 persons left their homes in one subdivision of Cuttack under the pressure of scarcity and high prices to find employment elsewhere, and it is computed that in two months of the same year 70,000 persons moved from the south of the Bhagalpur district where there had been a crop failure in search of work. Ib., p. 379.

[3] In the famine year of 1896–7 over £100,000 was paid by money order in Muzaffarpur. The amount remitted by money order in Saran aggregated £343,000 in 1910. Ib., p. 380.

emigration, and a famine in India was always the chance for those who were recruiting coolie labour for Assam, Ceylon, Malaya, or the West Indies. The famines not merely stimulated migration within the country, but migration abroad.

Though the land tax was usually remitted in times of famine, the system was made much more elastic after the famine of 1899.

With a population more mobile, better fed, and with increased capacity for self-help, with the great demand for labour in factories, mines, and plantations, and with a well-organized system of railways and extensive irrigation works, it is expected that the famines of the past will not again recur with such devastating effects. The British Government in India has famine by the throat.

Lord Curzon, speaking at the Society of Arts in 1907, and describing his experience as Viceroy of the 1899 famine, said that a great ordeal like that famine " showed one the nobility of which human nature was capable ; its capacity for self-sacrifice and its sense and power of duty. As he looked back on the experience of that time he did not know whether more to admire the patient and uncomplaining resignation of the native peoples, the sufferers themselves, or the heroism of the officers, both English and native, civil and military, to whom the charge of all those suffering thousands was committed, or the devotion of the missionaries, English, American, Canadian, European, of every nationality, women as well as men. They literally stood for months between the living and the dead, and they set a noble example of the creed of the Master. Many of these persons rested in forgotten graves, but he hoped it was not presumptuous to cherish the belief that their names were written in the Book of Life. Let those who wanted to see what the British Government was capable of doing in India go there, sad as the experience might be, not in prosperous times but in the throes of a great famine, and they would see what no Government in the world had ever attempted to undertake in the past, what no Government in the world, except our own, was capable of undertaking now, and what he firmly believed that no Government, European or Indian, by which we could conceivably be supplanted or succeeded, would dream of undertaking in the future." [1]

[1] *J.R. Soc. Arts*, 1907, p. 424 (*a*).

Irrigation

If one's imagination almost fails to grasp the immensity and variety of the problems of famine relief in a country as large as India, it is no less stirred by the engineering triumphs of the canals and water storage works started to mitigate the effects of famine.

Deserts have been turned into flourishing cornlands, canals have been made to pass through mountains and a river has been diverted from the Arabian Ocean to the Bay of Bengal for the purpose of watering arid tracts. Masses of flood waters have been checked by head works and dams, and guided into channels to fertilize the surrounding country. Furious mountain torrents have been taken on special channels of masonry above peaceful canals flowing beneath.[1] Conversely, canals have sometimes been carried above torrents. The Upper Jhelum Canal crossed a hill torrent which when in flood carried four times the maximum amount of the River Thames in flood. Sometimes it has been possible to confine these torrents in reservoirs and let them out gradually, in other cases the streams have been carried in great syphons below, through or alongside of the canal. Rivers which when in flood tossed down boulders of hundredweights as if they were pebbles have been duly tamed, canals were passed on aqueducts, one of them no less that 164 feet wide, over ravines and nullahs, not once but many times in the course of their length. The great difficulty encountered in pre-British days was that the flow of the canals was so strong that the courses became so deep that water could not be diverted on to the land. A multitude of dams and weirs has now been erected to check the flow, and the consequent erosion and water from the weirs is being harnessed for electricity and distributed to domestic weavers and other home workers. The great rivers Jhelum and Chenab in the Punjab have been diverted one into

[1] The Ganges Canal has one masonry superpassage 200 feet and another 300 feet wide, which will take off a flood 14 feet deep. The declivity of the bed of the Pathri torrent above this superpassage is 25 feet a mile, so that the rush and force of water is enormous when there is a flood. The Swat Canal has one aqueduct alone with 17 spans of 18 feet each, which has successfully passed floods carrying 45,000 cubic feet a second. The Budki superpassage on the Sirhind Canal carries two great torrents with a combined discharge of 60,000 cubic feet a second, across the Canal. It is 450 feet wide, with parapets 14 feet high and is carried over the Canal on seven arches, each of which is 31½ feet span, and is supported by piers 8 feet thick.

the other so as to ensure the economical use of their surplus waters in order to spare the waters of the Sutlej for the irrigation of other tracts further East. Over all these canals, bridges have had to be built at intervals, so that people can cross them.

The surveys necessary before the works can be begun have often been carried out under great difficulties. In the deserts of the Punjab the temperature was often continuously 110° with no shade, and only brackish water to drink, and very little of that. Work carried out in malarial jungles was even worse, the constant illness of the staff and labourers making progress most difficult. On the frontier working parties had to be guarded by soldiers, so furious was the opposition of the hillmen, who later became peaceful cultivators themselves. Local superstitions as to the danger of offending the river gods, often prevented the contractors from obtaining labour. Not merely was an adequate supply of labour a constant obstacle, especially in waste places like the Punjab and Sind, but the difficulty of getting fuel to make bricks and lime often hindered construction.[1]

Finance also imposed its all-important limitations. Engineers of genius had to fight for much larger schemes than seemed financially feasible at the time. Waste lands when irrigated were not much use without colonists so that vast schemes of colonization had to be planned, and the new population brought into any district needed protection and guidance at every hand's turn.

The general result has been that after about seventy years of canal construction, the mileage of the Indian canals would more than twice span the globe, being 55,202 miles in 1920–1, and the crops protected by canals alone cover no less than 28 million acres of land, and 50 per cent more will be protected when the works now under construction are being completed. On this work approximately 79 million pounds have been spent.

The irrigation works have made for security of life, they increased the yields and the value of the land and the revenue derived from it. They lessened the cost of famine relief, and have helped to civilize whole regions. In addition,

[1] To build the Sirhind Canal three gaols were established near the head works, and the work of the convicts was utilized on the canal. "Practically the whole 900 million feet of excavation in the main line were removed in baskets on the heads of men and women without the use of mechanical appliances of any sort." *Triennial Review of Irrigation in India*, 1918-21, p. 61.

they now yield a handsome profit to the Government of 7 to 8 per cent. As the Indian Government borrowed at 3 to $3\frac{1}{2}$ per cent, the net gain, apart from all other advantages, is 3 to 5 per cent. This is, however, an average profit. Some canals pay far more, the Chenab Canal, for instance, has brought in an average profit of 41 per cent in the last seven years.[1]

To those who have seen a famine the most important thing about irrigation is the increase in security and well-being that is the result. Only those who can visualize the effect of a scarcity—the able-bodied on relief works, the women carrying soil, the children thin and worn, cattle dying, and the desolation of the fields—can realize the difference in passing to an irrigated area where the crops are green, grain is plentiful, where families are intact, and children have energy to play about. The difference in the sum of happiness involved cannot be expressed in terms of money.

The normal annual rainfall varies from 460 inches at Cherrapunji, in the Assam hills, to 3 inches in Upper Sind. At one season of the year the greater part of India is deluged with rain and there is a rapid growth of vegetation, in another period it is a dreary sunburnt waste. Thus in any case it is necessary to get water for the dry period of each year. But the rainfall varies, as we have seen, from year to year, and a vast portion of India is not secure from famine owing to the failure of the rains, and one year in five may be expected to be a dry year, and one in ten a year of severe drought.[2]

The Punjab, Sind, North-West Frontier Provinces, the United Provinces except the sub-montane districts, a large part of Bihar, most of Madras and Bombay, except the coastal strip, portions of the Central Provinces, and a small tract in Burma, are the most uncertain regions, and it is in these areas that the principal irrigation works are to be found.

Irrigation works depend on the ability to obtain water, and this is possible when the Indus and its tributaries, or the Ganges and its tributaries, can be made available. They rise among snow mountains, and are fed from the melting glaciers and from the moisture given off by the Himalayas saturated with the monsoon. It is quite another

[1] The following account is mainly taken from *The Triennial Review of Irrigation in India*, 1918–21.

[2] Op. cit., p. 4.

question in the Deccan. Here there is not merely an uncertain rainfall, but the rivers depend on the rainfall, and are themselves nearly dry part of the year, while the rocky mountainous nature of the country makes it unsuitable for canals. The Kistna, for instance, which drains nearly 100,000 square miles of country and discharges in flood time 1¼ million cubic feet of water a second, dwindles during the hot weather to a small stream winding amongst sand-banks. In the same way the wells shrink and are apt to dry up.

Under these circumstances it is not surprising to find that from very early times attempts have been made in India to conserve water. The most frequent form of irrigation was to sink a well, and the silt in the Ganges valley offering little obstacle to well boring, that region is simply honeycombed with wells. They are also to be found all over India to provide water in the dry months. In addition to the wells, it was not unusual for some ruler to build with forced labour an earthen embankment across a valley or depression behind which the water collected, and the lakes thus formed might be drawn on when water was short in the cold weather or in times of drought. They also helped to maintain the subsoil waters for wells, and were known as tanks.[1] The difficulty here, however, is that the tanks do not fill up in times of drought, as the rains of the catchment areas is also short, but the rain conserved from a previous season may somewhat alleviate the situation. Some of the pre-British rulers also built canals. The Western Jumna Canal dates from the fourteenth century. The Eastern Jumna Canal in the United Provinces was constructed by the Moghuls, and the Cauvery delta system in Madras was still older, dating from the second century A.D. There were also some canals cut to take off the flood waters of the Indus. These works were not merely constructed by forced labour, the coolies being fed by the Government while construction was in progress, but they were also cleaned and maintained by forced labour, and the Government, which took its revenue in kind, obtained a larger share from the crops.

A falling dynasty could not insist on the forced labour necessary to maintain the canals, and the Jumna Canals ceased to flow about the middle of the eighteenth century.

[1] Two tanks in the Chingleput district of Madras are referred to in inscriptions of the eighth and ninth centuries.

The work was obliterated, and in many places covered with jungle. Even the Cauvery Canal, which had withstood the ravages of centuries, was in process of destruction through silting up, and the ruin of Tanjore was predicted in consequence in 1804.

The achievement of the English in India in the nineteenth century consisted chiefly in the provision of large scale systems of canal works, leaving wells and tanks to be made by the people themselves. About 11 per cent of the total cropped area was irrigated from Government works in 1918–21, about 5 per cent from wells and 6 per cent from other sources, i.e. the Government and private works were of equal importance, and while the English have been developing the great systems, the people themselves have during the century spent something like £2,000,000 on providing or deepening wells. The benefits of canal irrigation, however, extend beyond that of smaller works. The whole area gains from the rise of the subsoil water-level, due to the canal irrigation and from the additional moisture of the air, and it is "fairly correct to say that the area benefited by canal irrigation is some $2\frac{1}{2}$ times the area actually irrigated annually, i.e. approximately 25 per cent is actually benefited, and not 11 per cent, by Government works".[1]

In the twentieth century there was, as we have seen in the case of railways, an added impetus to great constructional works. Not merely were canal schemes on a vaster scale than ever projected, but Government assistance was given to the making of tanks, especially in the Deccan, on a large scale, and well-boring by Government engineers became part of the new irrigation policy. This extended scheme was possible, as in the case of the railways, because the irrigation works paid so well in actual money received from the cultivators. The Punjab canals, for instance, were so remunerative that more and more could safely be planned in that province and in Sind without imposing any burden on the taxpayer. On the other hand, the Government could afford to be extravagant, so to say, in the matter of water storage that did not directly pay in dues. Hence, after 1900, the great activity in tank building.

Irrigation works are divided into Productive works, Protective works, and Minor works. The productive

[1] Op. cit., p. 9.

works have been financed from loans, and are expected to cover their working expenses and interest in ten years' time. Most of the largest irrigation systems in India are productive. When a canal does not pay it is termed a "failed productive". There are fifteen of such works, as against forty-nine productives. Even the failed productives yield a return of less than 2 per cent after paying their expenses, and they protect a large area from famine, and therefore pay indirectly in that they save the cost of relief.

The protective works were financed from the current revenues of India, and are considered part of the famine insurance scheme. This was altered in 1922, and in future any works can be financed from loans, provided they are of public utility.

The canals are divided into two types. Perennial canals are those in which water is ponded up so that it can be obtained all the year round. Inundation canals depend on the rise of the river when the water enters the channels. As the rivers are in flood in the hot weather owing to the melting of the snows, they rise highest in the dry season when they are most wanted. Unless the waters rise of their own accord to the canal levels it cannot be forced into the channels, and naturally is not available all the year round. This method of inundation canals though less certain is cheaper, as enormous barrages have to be erected to secure the rise that will give a perennial supply. The modern works on the Indus and the Sutlej are designed to turn inundation into perennial works.

Like the making of the railways, the engineering of canals had to be learnt by experiment and experience. The English engineers began first of all by reviving and improving the three large canals they found, two of which were derelict. The Western Jumna Canal was tackled first, to be followed by the Eastern in 1830. Both are a long history of mistakes, of water-logging of the areas to be irrigated, of the appearance of saline efflorescence and epidemics of malaria. In both cases the mistakes were remedied in time, and the first paid $11\frac{1}{4}$ per cent in 1919–20 and irrigated 855,000 acres, and the second 32 per cent and commanded 400,000 acres. In 1834 the Cauvery system came under reconstruction. Instead of the average area of 600,000 acres, which had been irrigated by the old canal, it now waters a million acres and

consists of 1,500 miles of main canals and 2,000 miles of distributaries. The works yielded 17 per cent in 1919–20.

From these three canals the British engineers proceeded to make new systems. The surveys for the great Ganges Canal were made in 1836, and ground was broken in 1842. It was opened in 1854. The Upper Bari Doab Canal was begun after the Punjab was annexed to enable the Sikh soldiery to settle down as cultivators, i.e. the canal was intended to keep the peace by helping a warrior people not merely to beat its swords into ploughshares, but by giving them land to plough. In 1919–20 this canal irrigated 1¼ million acres and gave a return of 16½ per cent on the capital. The region commanded has been converted "from a wild jungle into highly cultivated provinces and the disbanded Sikh soldiers became successful cultivators". Nowhere are the benefits of canal irrigation more thoroughly appreciated, and nowhere is there a more steady demand for water.

The Godaveri Canal was made in a delta of 2,000 square miles, which the river mouths divided into three parts. Between 1832 and 1841 there were four famines and three years of scarcity in this delta, and Sir Arthur Cotton, then Major Cotton, an artilleryman, was deputed to report on the subject. He prepared a scheme for the irrigation of the delta, which was sanctioned in 1846. It entailed 2¼ miles of weir and 1½ miles of embankment, besides other works, and "it was carried out in a place where no engineering works of any size had ever been constructed, with rude Indian labour and with apparatus which was generally of quite a primitive description".[1] It demonstrated the possibility of harnessing for man's use the greatest and most formidable rivers. "The Godaveri delta system has been of untold value to the tract it irrigates. The delta, which was formerly one of the areas most liable to famine, is now an expanse of paddy fields broken by gardens of fruit-trees. Failure of crops is practically unknown, and the main canals furnish an excellent means of transport."[2] In 1919–20 it returned nearly 25 per cent on the capital laid out on the works. In the same fashion the Kistna delta was dealt with and the canals completed in 1855. Between 1850 and 1870 canal-making proved to be a success, and spread over the rest of India.

[1] Ib., p. 37.

[2] Ib., pp. 38–9.

It will be noticed that a number of most important works was undertaken in the days of the Company and before the railway era. The great engineers were the canal engineers, not railway engineers. This was almost a natural sequence from the fact that the English themselves had covered England with canals for fifty years (1780–1830) before their railway system was of any importance. They understood canals and their value, their engineers were either canal-trained or thought in terms of canals and water. But the English canals were navigation canals, and had to serve the needs of populous areas; the Indian canals had to penetrate deserts and waste lands in order to bring the water which should create the population or enable it to increase. They were designed to extend cultivation, and as navigation canals they have not been a great success except in the deltas of the rivers.

So successful were these early canals that private companies began to take up the question of canal-building, and it is a curious fact that not one of the four private projects were paying propositions. A Madras Irrigation Company was formed in 1863 with a capital of one million pounds to carry out a great system of canals ranging from the Tungabhadra and the Kistna. By 1882 the Company showed a deficiency of two millions, and the Government was obliged to buy it out. Another Company, the East India Irrigation Company, was formed in 1858 to build a canal in Orissa and to deal with the flood waters of the Mahanadi and other rivers. By 1866 the whole capital had been spent, the Company could not complete the works begun in 1863, and the Government took them over. It has proved to be a valuable protective work in the end, though not even yet a paying asset.

Another series of canals, the Son Canals, were planned by the East India Irrigation Company, but it failed before the work was undertaken. A fourth series of canals, the Midnapur, was also begun by the Company and taken over by the Government.

Thus " the four greatest failures in the history of Indian Irrigation were all works inaugurated by private enterprise ".[1] The companies, in their desire to secure immediate profits, rushed into schemes, commenced construction too soon, did not study whether the areas required irrigation

[1] Ib., p. 57.

or whether the people would take water, or whether there was a sufficient population to make the supplying of water a paying proposition.

It is only by slow degrees that people can be trained to use water, and for many years a large part of the water is wasted. Using irrigation water means paying for it, and the Indian cultivator tries to put off taking water till a famine is on him. Twenty years is the period generally estimated as the time before the water will be fully taken up. No Company would be likely to prosper if it had to wait so long a period with little or no return. It is only in the twentieth century that the Government canals have done more than clear their interest on the capital borrowed for their construction and have become profitable assets.

The failure of private enterprise led to a new policy. We have already seen that in the 'sixties a wave of opinion was growing up in official India in favour of Government enterprise on the railways. The same criticism of company management was provided by the failure of these canal projects, and it was decided in 1866 to push on irrigation works but to raise money by loan to do so. There thus began a series of much larger canal schemes accompanying the State railway system inaugurated in 1869. The Sirhind, the Lower Ganges, Agra, Lower Swat, and Mutha Canals were built in this way. It is in this period that we get a series of canals that did not merely water precarious tracts, but which were the beginning of inner colonization in India.

The Lower Swat Canal was built to pacify the frontier and induce the tribes to settle in British territory and become peaceful cultivators. It was begun in 1876. The country round was barren, treeless, and almost uninhabited, and was given over to predatory marauders. It was a country almost devoid of fuel for brick-making and other purposes. In 1919–20 the canal irrigated 162,000 acres and yielded a return of $9\frac{1}{2}$ per cent. The barren wilderness of 1875 had become by 1895 "a wide expanse of cultivation, dotted with villages, occupied by a law-abiding and contented peasantry. In 1875 there was not a tree to be seen, by 1895 avenues of trees had sprung up along the canal and its distributors. In 1875 no officer was permitted to go outside cantonments without being armed and accompanied

by armed escort",[1] by 1895 it was as secure as any region in the Punjab.

The desert canal in Sind was another great civilizing undertaking of the same nature, dating from 1873.

The most interesting of the series of canals which led to colonization and settlement were the canals between the Jhelum and the Sutlej. The greater portion of this region has a rainfall of less than 15 inches a year, and much of it less than ten, and even that was liable to fail. Practically the whole vast stretch of country was uncultivated waste, but it had a good soil and only needed water. There was no resident population beyond a few nomads, who were partly camel herders and partly thieves. It was not merely a question of bringing water to this region, but of bringing in population as well. The colonizing projects were begun in 1882 with the small Sidhnai Canal. Colonists were encouraged to move to occupy the land now irrigated, and so successful was the experiment that it paid 40 per cent. The Government was thus encouraged to go further, and its plans were based on the Sidhnai colonization experience.

The next scheme was, however, far more ambitious, it was that of the Lower Chenab Canal of 1890. "The tract which the Canal was designed to serve was one of extreme desolation. Water lay for the most part from eighty to a hundred and twenty feet below the surface of the soil, while the rainfall was scanty and uncertain. With the exception of snakes and lizards, the country was extraordinarily devoid of animal life. The vegetation, such as it was, consisted mainly of dusty shrubs, some of a certain value as fuel, but others of no use either to man or beast, and grazing was, generally speaking, conspicuous by its absence. The only inhabitants of the country were the indigenous nomads, a spare and hardy race who eked out a precarious existence by means of their camels and goats, being almost independent of any form of diet other than milk. Such was the country in which the engineers were designed to live and labour for many years, and which the Lower Chenab Canal has converted from a wilderness into a garden." [2]

Colonization began in the Punjab in the Chenab Colony in 1892, in the Jhelum Colony in 1901, and in the Jamrao

[1] Ib., pp. 69-70.

[2] Ib., p. 85.

Colony in Sind in 1898. The area commanded by the Lower Chenab Canal, probably the greatest irrigation work in the world, exceeds three million acres, the Lower Jhelum commands about one million acres. A colonization officer was appointed in each case. The area was mapped out in squares either of 27, 25, or 16 acres, and these squares became the unit of allotment, each square having its separate inlet of water. In this way fragmentation and scattered strips were avoided. The squares were subdivided into one-acre fields by the cultivators, and were grouped in villages of 1,500 and 2,000 acres. In each village a plot was marked off for grazing and communal purposes.

The people for the Chenab Colony were drawn from the densely populated districts of the Punjab so as to afford some relief to the over-population. It was not, however, intended that these regions should be settled with one type only. Peasants were offered one square, yeomen four or five, i.e. 104–30 acres, and capitalists up to 500. Each colonist was only given land for three years, and the peasants had to reside in the village. If at the end of that period the settler was satisfactory he was given a permanent right of occupancy, but he could not give, sell, or mortgage his property. It was, however, hereditary. Only the capitalist received full proprietary rights, which he had to purchase. The yeoman paid a small annual sum of 4–5 Rs. per acre. All grantees had to pay for the survey and the construction of the village watercourses. The original graziers were also given land and had to furnish as payment for each square a camel suitable for army transport. A revised procedure was introduced in 1910 by which after a further term of probation, tenants could purchase their property in easy instalments. As the Punjab Alienation Act of 1900 prohibits the transference of land to the non-agricultural classes, there is not now the same reason to fear the transference of land to moneylenders if people should become owners.

On the Jhelum Canal the colonist got an extra square if he kept a mare for the breeding of army remounts. In other cases the tenant had to agree to supply labour for the repair and maintenance of the canals as a condition of becoming an occupier. Larger grants were given to those who undertook to carry out better agricultural methods which should be an object lesson to others.

The colonists, all picked men—the old, young, feeble,

and worthless eliminated—were brought in groups and from the same district, so that the village organization was preserved. Headmen got an additional square. They brought their carpenters, blacksmiths, potters, water-carriers, washermen, and the like, and a square or two of land was reserved for these people to cultivate, although they obtained no permanent rights of cultivation.

There were great difficulties to be faced in the early days of the Chenab settlement. People did not like their squares and wanted to change. The settlers were attacked by the original graziers, thieves were a constant difficulty, water would sometimes not flow on to the lands allotted, cholera broke out, and the pouring of water over the land gave rise to malarial fever of a virulent type so that at one time scarcely a single individual was able to leave his bed and hundreds of acres of ripe crops were destroyed by birds or beasts. Plague was also rife. The supply of drinking water was another difficulty when the canals were closed, as they necessarily were, for cleaning or alteration. It was some time before wells were constructed, the Government advancing one-half of the cost. It was the business of the Colonization officer to supervise almost everything connected with the human being and the land, to attend to everyone who had a grievance, and every settler turned to him for assistance and advice. He was their father and mother and a benevolent autocrat.

In the early days not the least of the troubles of the colonists was the difficulty of disposing of the produce of the land. It was difficult to make hard surfaced roads in the canal areas as road metal was unobtainable, and numerous bridges were necessary to cross the water-courses. The early colonists had to march to the Chenab region through a waste country inhabited by tribes who showed no mercy to those whom they could waylay. The country presented so desolate an appearance that many of the migrants returned home. Those that "stuck it" were rewarded by an excellent crop. The news of the magnificent harvests which had converted poor colonists into rich men quickly spread, and thousands applied for land, so that the colonization officer could pick and choose, and much of the difficulty of transport was lightened when the railway was made in 1895. In the Jhelum and Bari colonies the railway was brought into existence before colonization was undertaken. Roads were made when

the railways could convey road material, and towns were created. The idea has been to lay out the principal towns with wide straight bazaars and large grain markets, leaving space for public offices, schools, hospitals, and veterinary dispensaries. Lyallpur, founded in 1905, had in 1911 a population of 19,578 people. The smaller towns are laid out as collecting centres for the export or internal trade. In ten years the population increased from 8,000 to 800,000. Even the nomads became successful cultivators. The first auction of land in the Lower Chenab Colony was held in 1892 and fetched Rs. 43 per acre. In 1919, when 3,500 acres of waste land in the new Lower Bari Doab Colony were sold, an average price of Rs. 593 per acre was realized, and a maximum of Rs. 1,105. Shop sites in the market towns averaged Rs. 40,000 per acre.[1]

This carefully regulated planned colonization, with all land surveyed and railways built before the settlers arrive, is in striking contrast to the way in which the English peoples settled in Australia, Canada, or New Zealand, to say nothing of South Africa, where it was even more haphazard. Group settlement has been the rule in the Punjab for thirty years past.

These colonies not merely paid well in dividends but they helped to relieve the pressure of population in the congested districts of the Punjab and provided a great grain reserve for all India. Colonization enriched the cultivator and added several thousands of square miles to the cultivated area of India. The water is even modifying the fierce heat of the climate. The area irrigated had risen in ten years from 270,000 acres to 2,000,000, and the total value of the crop in the three colonies was about 6 millions sterling in 1907. As the capital cost of the canals at that date was less than $3\frac{1}{2}$ millions sterling, the value of the crop in one year was almost double the capital cost of the canals. The wheat exported from Karachi was valued at $2\frac{1}{4}$ millions sterling in 1898–9 and 8 millions in 1904–5.[2]

One difficulty in the new colonies was the scarcity of labour and the result is that the colonists are beginning to use agricultural machinery, especially reaping machines.

[1] Ib., p. 89.

[2] For further details as to colonization, Robertson (a colonization officer), "Irrigation Colonies in India," *J.R. Soc. Arts*, 1907, p. 783. Also "The Punjab Canal Colonies," Sir J. Dowie, *J.R. Soc. Arts*, May, 1914, p. 611 ff.

Cultivation of a better type is practised than is common in other parts of India, and the canal colonies are considered good grounds for experiments in improved agricultural methods. The opening up of new ground has done much to break up the traditional conservatism of the Indian cultivator.[1] The villages also tend to become more sanitary, and rewards have been given for the best kept village.

The famine of 1899 had a great effect in accelerating the progress of irrigation works, to which the new policy of national development also contributed. An Irrigation Commission was appointed to report on the whole question of extension, and especially on the further development of protective water storage. The general result was that after this date there was an enormous acceleration in the building of protective canals and dams, even though not directly remunerative. The Bombay Deccan, a precarious tract where it is not easy and sometimes impossible to make canals owing to the lack of snow-fed rivers, the rocky soil, and irregular nature of the highlands, came in for special attention, and vast storage tanks are planned, some of them capable of impounding 20,000 million cubic feet of water.[2] Tanks increase the subsoil water by percolation, and so add to the security of the wells.

The Central Provinces were considered safe from drought till 1899, when they too were overwhelmed and one-quarter of the population was at one time in receipt of relief. Large

[1] That irrigation needs great skill and is not always uniformly successful may be seen from the following quotation from a former Director of Agriculture in the Bombay Presidency :—

"Wet cultivation requires far more capital than dry cultivation. For effective work the land must be levelled and in many cases drained, tillage is more exacting, and the handling of the valuable crops more costly. Few of the landholders have the necessary capital for the purpose and few have the requisite skill or business capacity to grow the more valuable crops successfully, and their efforts to grow sugar cane are often lamentable. There is a small number of really skilled cultivators who grow good crops of about 50 tons of cane to the acre and make large profits . . .

"The present situation of the canal areas may be roughly described as follows : The land is seldom levelled or laid off for irrigation in the manner essential to effective production and the economical use of water. The fields are greatly subdivided into sizes and shapes which make proper irrigation almost impossible . . . On the Godavari Canals, which have been opened up only ten years, 6,300 acres have been totally or partially ruined up to date by water-logging and the salt efflorescence that results from it. This water-logging is no doubt largely due to waste of water on the part of the cultivators." Keatinge, *Agricultural Progress in Western India*, 1921, p. 81.

[2] *Moral and Material Progress*, 1923, p. 65.

irrigation works are now being undertaken to supplement the seasonal nature of the rainfall there. The dry tracts of Burma also became the scene of irrigation works after 1900.

The Government had since 1878 put aside 75 lakhs every year for protective railways and canals. Since the railway net was reasonably adequate the whole money was devoted after 1900 to protective irrigation, and another 25 lakhs was added in 1910. The principle upon which these protective works were undertaken was based on the estimated cost of famine relief and the probable loss of revenue in any special area to be protected where there are no works. That amount approximately ascertained was the amount that could reasonably be spent on preventing the possible famine by water storage.[1]

Other great schemes were undertaken in the colonizable areas of the Punjab, and still vaster schemes were planned in that area and in Sind.

The Triple Canals Project is one of the most remarkable pieces of engineering imagination and accomplishment in the world. The four great Indus tributaries were already harnessed for canals, but the Chenab and the Ravi had no water to spare for further large schemes. A large area to the west of the Sutlej—the Bari Doab—needed irrigation. Like the rest of the unirrigated tracts, it was a waste owing to lack of water. It was proposed at first to tap the Sutlej to irrigate this region, but the engineers suggested that the waters of the Sutlej would be required to irrigate the territory on either side of its own banks, and if diverted that tract would remain barren. They proposed to take the water from the Jhelum, the most westerly of the four Indus tributaries which had a surplus, and bring it by canal, which would irrigate large tracts on the way, to the second river, the Chenab, and turn it into the Lower Chenab Canal. The water from the Chenab, now not required for its own canal, was tapped higher up by another great canal, and the Chenab waters, conducted through another desert waste which it irrigated en route, were taken in a level crossing

[1] It has been estimated that in the Central Provinces the agricultural classes have lost 40 crores of rupees, or more than 26 million sterling, between 1895 and 1902, through failure of the rains—an amount equal to the total land revenue for fifty years while seven years' land revenue would be required to recoup the State for its famine expenditure between 1896 and 1902. *Cd.* 1089, p. 12. This amount, therefore, could reasonably be spent on protective works which might obviate such a loss.

over the third river, the Ravi, to irrigate with these waters the area beyond known as the Lower Bari Doab region.

Three new areas for colonization were thus created by an Upper Jhelum cut, which fed eventually the Lower Chenab Canal, an Upper Chenab cut which watered the region between the Chenab and the Ravi and the Lower Bari Doab Canal, fed from the Upper Chenab. Thus the waters of the Sutlej, the fifth river, were free for the vast projected canalization and colonization of the Sutlej scheme.

The Triple Canals Project was completed between 1912 and 1915. It consisted of 433 miles of main canals: the total area commanded was 3,997,000 acres, or 6,250 square miles. Up to September, 1920, 880,000 acres had already been allotted to colonists. Nearly 2,500 square miles are now for the first time being brought under the plough.[1] The general result is that these eastern regions promise to become as prosperous and fertile as the famous Bengal, with this difference, that they are even more secure in that their water supplies cannot fail, unless the glaciers of the Himalayas should disappear. In famine years these regions can offer constant employment to labour from other parts of India.[2] Of course, the continuance of this prosperity depends ultimately on the guarding of the Western frontier, and the prevention of those invasions from Central Asia which devastated the Punjab in the past. The army is almost as much an insurance here as the canals. On these canals depend the revenue, the food, and the very life of the Punjab and Sind, for of the whole cultivated land 98 per cent depends upon canal water. In all India nine-tenths of the irrigation from the great canals, most of the protection afforded by embankments, nearly all the navigation canals, and about two-thirds of the irrigation from minor sources other than wells are due to works which have been carried out in the fifty years after the Mutiny.[3]

Two even greater projects have been begun in 1921. The Sutlej valley canals will turn inundation areas with their fluctuating water supply into perennial canals and the area already commanded will be greatly extended. Over five million acres will be irrigated, part of which will be in Bikaner and Bahawalpur, and thus another $3\frac{3}{4}$ million

[1] *Triennial Review.*
[2] *Decennial Report*, 1901–2 (1903), p. 202.
[3] *Cd.* 4986, 1909, "Some of the results of Indian Administration in the past fifty years," p. 22.

acres of desert waste will become available for colonization.[1]

The Sukkur Barrage, on which work was begun in Sind in 1923, is the greatest irrigation scheme yet planned. A barrage a mile long will be built across the Indus and from the barrage seven canals will take off, irrigating five million acres from a perennial supply of water, of which at present two million acres are fertilized by inundation only. Thus three million acres of uncultivated land will become available. This region, too, will need colonization.

When these two schemes come into operation and the expansion of existing schemes is carried out, it is estimated that about fifty million acres will be protected or irrigated by these vast public works.

A new era has also begun with regard to wells. The Irrigation Commission calculated that there were approximately $2\frac{1}{2}$ million wells in India, irrigating some $12\frac{1}{4}$ million acres. The wells averaged from 35 to 40 feet in depth and the water was lifted principally by cattle power. In many ways well irrigation is the most satisfactory of all, as the water, being difficult to obtain, is treated with respect and used with care. In the case of canal water it is often used too lavishly, and the salt is brought out in the soil or the earth is waterlogged, necessitating expensive drainage. The Government is now trying to introduce small power pumps, which are useful when two or three wells can be linked together. The engineers of the Department of Agriculture are also available to bore new wells with machinery. In the Punjab in 1922–3 there were 343 bores, and in the United Provinces 591, and of these by far the larger part were successful in finding water.[2]

The two outstanding features of the "Public Works" era have been the railways and the irrigation works. Both have created a security of life hitherto unknown, both have created new opportunities for the peoples of India, and both have not merely assisted the whole economic development of India but, after 1900, were paying assets. The canals being grouped chiefly along the Indus and the Ganges river systems or in the deltas of the rivers on the East Coast had a more local influence than the railways, which affected commercial, social, and political life far more profoundly than the stimulus to agriculture given by the canals. Nor could the waterways be as effective for

[1] *Triennial Review*, p. 171. [2] *Moral and Material Progress*, p. 123.

distribution in famine times as the railways, and were it not for the railways many canal areas would not find markets. The famines reacted on all Government policy, but the railways altered the whole economic structure of India and her commercial relations with the world.

Finance and Trade

The great Public Works could not have been created had it not been for the capital furnished by England in the shape of loans or investment in companies. These loans necessitated the payment of interest and until the railways and canals ceased to create deficits the money had to be raised by taxation to meet this interest. These payments were remitted to England in the shape of goods, and a striking feature of the trade of the period was the surplus of the exports over the imports, which was incorrectly termed " the drain " by the growing body of critics.

Finance during this period was complicated by the fact that these payments had to be made on a gold basis with a falling rupee in silver, and therefore larger amounts were required to discharge the indebtedness. On top of this there was a further complication. England had become convinced that free trade was the right thing for all mankind, and was insisting that this policy should be applied to India, and the tariff was accordingly placed on a revenue basis in 1882. To reduce the customs meant a financial loss, but the whole question then became mixed up in nationalist politics. It was represented that England was insisting that India should be free trade in order that Lancashire should flood the country with British cotton goods to the detriment of the hand-loom weaver and the Indian mills. There was, of course, an exaggeration in the statements made, but their effect was to make the tariff the touchstone of the new national policy. The idea grew that India must be able to put on a protectionist tariff to defend herself against exploitation by England or she could never become industrial, and this view was reinforced by the growing power of the cotton and iron interests in this period. India became nationally sensitive, as the United States had been between 1763–76, and any supposed assertion of overlordship was intolerable. Thus the tariff assumed a political importance out of all proportion to the economic values involved.

We have already seen that the finance of the half century after the Mutiny had become much easier because of the cessation of the large expenditure on wars and the beginning of the profits on railways and irrigation. For the twenty years previous to the Mutiny there had been fourteen years of deficit and six of surplus, with a net deficit of £16,393,000 and an addition of £15,900,000 to the debt. Then the Mutiny had to be paid for, and this added another large item to the Public Debt on which interest had to be met in England. In spite of this during the next thirty years there were twenty-one years of surplus and nine of deficit, yielding in all a surplus of £24,000,000. This was attained after meeting all the famine relief expenditure and after paying for protective railways and irrigation works out of revenue—a very creditable achievement. After fifty years of direct rule the debt in India in March, 1908, amounted to £246,000,000, of which 177½ millions had been incurred for railways and 30 millions for irrigation works. The Public Debt of India, taking out these productive items, was only £38,500,000 as against £51,000,000 before and £93,000,000 after the Mutiny period. There had thus been a great reduction of debt.[1]

At the same time the revenue trebled, rising from Rs. 317 million in 1856–7 to Rs. 1,084 million in 1906–7. The gross expenditure also showed a large increase. In 1856–7 it was Rs. 318 million and in 1906–7 Rs. 1,073 million. A large amount of this increase was due to the cost of defence and to expenditure by the departments of railways, canals, forests, posts, and telegraphs. As we have seen, the railways were a constant deficit in these years. There was, however, an increase of Rs. 480 million outside these items, partly due to the silver difficulty and partly due to a higher administrative standard—better facilities for justice, more police, education, hospitals, and the rise of wages and salaries.[2]

[1] *India in the last Fifty Years*, p. 17.

[2] "The weak point of our financial administration in India is not that we take more from the people than their native rulers did but that what we take barely suffices for the cost of our administration. But our Government, although less magnificent, rests on a more costly basis . . . No previous Government of India ever kept up an army on such a scale of efficiency as to render invasion and piratical devastation impossible from without and to absolutely put down internecine wars and the predatory nations within. Those invasions and depredations ruined thousands of homesteads every year. . . . No native dynasty ever attempted to develop the resources of India by a network of com-

[1] *Expenditure.*	*Per cent of gross expenditure.* 1881–2.	1891–2.
Interest	7·61	5·44
Post Office	2·82	3·06
Telegraph, Mint, Civil Departments	17·44	17·46
Civil, Miscellaneous	7·05	6·35
Famine	2·46	1·60
Railway Construction	0·80	0·21
Railways revenue	17·49	25·52
Irrigation	3·21	3·71
Roads and Buildings	7·90	7·82
Army	30·92	28·07
Special defence	—	0·76
	100	100

The chief source of the revenue in the whole period was the land revenue, and the next most important items were the salt and opium monopolies. The sale of opium in India was reserved for the Government by Warren Hastings, and an export duty was levied on the large amounts of opium bought by China. The salt revenue

munications. Some of the emperors constructed great military highways, but the idea of systematically opening out every district of India by commercial trade routes, by roads, railways, and canals is a purely British idea . . . No Moghul Emperor ever mapped out India for judicial purposes, assigning to each small district a court of justice maintained from the imperial exchequer. The district records show that when we obtained the country the people had simply to settle their disputes among themselves, which the landholders did very profitably by bands of *lathials* or clubmen, and the peasantry with the aid of trial by ordeal, the divining rod, and boiling oil. Where a law officer existed in the rural districts he was not a salaried judge drawing his monthly pay from the Treasury and watched by superior courts, but a mere seller of decisions dependent for his livelihood on the payment of litigants. The police of the Moghul Empire were an undisciplined, half-starved soldiery who lived upon the people . . . The prisons themselves were ruinous hovels whose inmates had to be kept in stocks and fetters or were held down flat under bamboos, not on account of their crimes, but, to use the words of an official report of 1792, 'because of the insecurity of the jails; the jailer had no other means of preventing their escape.' No Moghul Emperor ever conceived the idea of giving public instruction as a State duty to all his subjects . . .

"In these, as in other departments, the English have had to build up from the very foundations the fabric of a civilized Government. The material framework for such a Government in court-houses, public buildings, barracks, jails, hospitals, and schools has cost not less than a hundred millions sterling. But the revolution in the inward spirit of the administration has involved a far greater and more permanent expenditure than this reconstruction of its outward and material fabric. We have had to reorganize a Government conceived in the interests of the pomp and luxury of the few into a Government conceived in the interests of the well-being and security of the many." Hunter, *India of the Queen*, pp. 174–6, reproducing lectures given at Philosophical Institute in Edinburgh, 1879–80.

[1] *Moral and Material Progress*, Decennial Report, 1894, p. 202.

increased during the nineteenth century because the price of salt was reduced by the cheaper railway transport, which lowered the price and stimulated consumption. The salt tax had also been lowered, and the inland transit duties removed, in 1879.[1]

The excise on liquors was retained. Two new taxes were, however, introduced, the Income Tax, in 1886, and provincial rates.[2] The relative importance of the various items during the 'eighties may be seen from the following table :—

	Revenue.	*Percentage of gross Revenue.*[3]	
		1881–2.	1891–2.
Land		40·91	40·27
Opium		18·38	13·46
Salt		13·75	14·51
Stamps		6·30	7·16
Excise		6·39	8·60
Provincial Rates		5·40	5·89
Customs		4·39	2·86
Assessed Taxes (Income Tax)		1·00	2·78
Forests		1·63	2·50
Registration		0·53	0·67
Tributes		1·32	1·30

Although the customs formed but a small proportion of the whole in 1881–2 and were reduced during the following decade, the controversy over the cotton duties had an important effect in stimulating a nationalist feeling.

We have already seen in our previous period that the internal tariffs between the Presidencies were abolished and that the sea tariff had become the same for all India. It then became a question as to what the tariff should be, high or low, protectionist or free trade. The matter was complicated by the fact that the Mutiny had to be paid for, and that the abolition of the internal customs had left a deficit which had to be made up somehow. As far as

[1] To levy the Salt tax before 1843 it was necessary to maintain a customs line extending for nearly 2,500 miles from Torbela near Attock, on the Indus, to the Sambalpur District of Bengal. The line was guarded by an army of nearly 13,000 officers and men and consisted along a large part of its course of a huge cactus hedge supplemented by stone walls and ditches. Treaties with native states and the acquisition of the Rajputana salt sources in 1878 enabled the abolition of the customs line in 1879, except for a portion of the Indus, which was abolished in 1896. *Imperial Gazetteer of India*, vol. iii.

[2] The income tax was originally imposed in 1860–1 and discontinued in 1873, when a licence was substituted. Incomes below Rs. 50 were exempt. Agricultural incomes were exempt, as they paid land revenue.

[3] *Moral and Material Progress*, Decennial Report, 1894, p. 202.

the customs were concerned, there was a considerable number of export duties on indigo, jute, linseed, raw silk, lac, and other articles. There was also a preference on British goods, but the average rate of import duties was low, being only 5 per cent. In 1859 a general rise to 10 per cent was authorized, and luxury articles were taxed 20 per cent. This meant that the duties on British cotton piece goods were doubled. In 1864 the rate was lowered to $7\frac{1}{2}$ per cent, and in 1875 to 5 per cent, and all export duties were removed except those on rice, indigo, and lac. The duties on yarns had, however, been reduced to 5 per cent in 1861, and when piece goods paid 5 per cent in 1862 yarns were reduced to $3\frac{1}{2}$ per cent, the idea being that the domestic weaver would be enabled to obtain his material cheaper, and that he would be thereby assisted to hold his own. As long as there was a duty of 5 per cent on cotton piece goods, the Indian manufacturer and the hand-loom weaver had a preference over British goods. A demand was formulated on several occasions in the 'seventies in the House of Commons that this preference should be abolished and that India should become free trade. Lord Salisbury considered that this preference was unnecessary, that it was a burden on the consumer in India, and that it discriminated unfairly against another part of the Empire, and that it ought to be abolished. The Indian Government was not willing to sacrifice the £800,000 a year that the tax brought in, and moreover objected to having its budget dictated from England. It was argued that there was no protection involved since English goods and Indian goods did not really touch the same market since each catered for different classes.

In 1882, with a surplus revenue, the import duties were abolished, and India became free trade. Special import duties on arms, salt, opium, and alcoholic liquors and an export duty on rice were retained, and to these in 1888 was added an import duty on petroleum.

In these twelve years under Free Trade the cotton industry in India expanded rapidly. By 1894 the falling rupee made it necesssry to impose a 5 per cent duty all round to get revenue, and in so far as this was applied to cotton piece goods it was balanced by an excise on all yarn above the count of 20. As the bulk of Indian yarn was below 20, about four-fifths of the production was not affected. In 1896 this limitation was abolished and an excise balanced

the import duty, which was now fixed at 3½ per cent, thus re-establishing free trade.

It was quite obvious that the Bombay mills could hold their own with ease, favoured as they were by proximity to their markets. It was equally clear that English goods did not compete except in a small range of goods, as the English made fine goods and the Indian mills a coarser type, but articulate Indian opinion resented this dictation by England and constantly agitated to have the cotton duties altered. Not till 1917 was this wish granted.

The period witnessed a rapid increase in the value of trade, which is shown in the following table :—

	1835–40 = 100.					
Imports :—	1841–2.	1851–2.	1861–2.	1871–2.	1881–2.	1891–2.
Merchandise	157	246	449	646	988	1,397
Treasure	78	215	638	494	483	628
Exports :—						
Merchandise	125	179	328	571	740	977
Treasure	205	366	272	588	438	1,309

If fifty years only be considered where 100 rupees' worth was imported in 1841–2, there was 874 rupees' worth brought in in 1891–2, while the exports increased as from 100 to 777. For every 100 rupees' value imported at the beginning of Her Majesty's reign, India imported, in 1891–2, 1,400, and exported 977.[1]

Wheat, a new export since the opening of the Suez Canal, had become the most important item in the decade 1881–91. Rice followed it closely. Oil seeds and tea had increased steadily in importance; jute still held its own, but the most striking feature in the list was the growing export of manufactured goods. On the other hand, there was a falling off in the very important item of raw cotton, much of which was used up at home.

	Exports (*mill.*) Value Rs.	
	1881–2.[2]	1891–2.
Raw Cotton	14,9	10,7
Opium	12,4	9,5
Wheat	8,6	14,3
Husked Rice	8,2	13,2
Oilseeds	6,0	12,2
Raw Jute	5,0	6,8
Tea	3,6	5,9
Hides	2,0	2,3
Cotton piece goods	0,5	1,1
Cotton Twist	1,3	5,7
Manufactured Jute	1,0	2,5

[1] *Decennial Report*, 1894, pp. 315–17.
[2] *Decennial Report*, p. 317.

Trade was also changing its direction. Raw cotton only went in small quantities to England. As cotton-growing in the United States revived in the 'eighties, English manufacturers preferred to use American cotton as it had a longer staple. It was also better prepared and graded. Egyptian cotton was equally good for most purposes, and these became the two main sources of supply for the English finer cotton goods. Raw cotton from India had, however, found a new market by the end of the period in Japan, but had gained it at the expense of cotton twist from Bombay mills. In other words, Japan was starting her own spinning factories, and no longer required yarn to the same extent, but required raw cotton to work up into twist. Indian oil seeds began to go increasingly all over the world, and while ground nuts went to Marseilles, linseed began to go to the United States in return for petroleum. Opium was the great export to China and gunny bags were sent to Australia. Generally speaking, the trade of India with the Far East was increasing, her trade with Continental Europe was increasing, and the value of her exports to England was proportionately declining.

One of the most interesting features of the trade of the period was the continuous growth in the quantities of tea exported accompanied by an increase of the areas planted, which expanded by no less than 85 per cent between 1885 and 1900. The production, however, increased by 167 per cent, and the tea crop of 1900 was 197 million pounds. Tea in consequence fell rapidly in price and a restriction of output was planned. This was easier to effect than the rubber restriction of 1923. In that case a large proportion of the rubber was produced outside the Empire, in Java, but Assam and Ceylon had a monopoly of strong tea, China tea only appealing to a limited number of people.

The paid-up capital of the tea companies in India at the end of the century was no less than £10,300,000, and there were many private concerns not included in this total. The importance of the tea industry did not merely rest on the large investments and exports, the industry was socially important, as it had led to the colonization of Assam, and was one of the factors making for internal migration and the break-up of the immobility of the cultivator.

After England, Australia was the best customer for Indian tea, but there was a growing consumption of tea in India itself.

The coffee production and export showed, however, a falling off, chiefly owing to the competition of Brazilian coffee. Indigo was another export which suffered greatly from the competition of artificial indigo, the value of the exports falling from £2,142,700 in 1891–2, to £1,234,800 in 1901–2, and the area under indigo declined from 1,155,800 to 803,700 acres.[1]

Of the imports during the period, the most important were cotton goods, the £15,155,666 of cotton manufactures of 1874[2] rising to £20,165,000 in 1901–2. The import of yarn was valued at £2,628,959 in 1874, and £1,765,000 in 1901–2, which showed how India was beginning to supply her own yarns. The most interesting feature of the period was, however, the growing import of sugar, which came from Mauritius, Germany, and Austria-Hungary. In 1892–3 the value of the sugar imports were £1,750,000, in 1901–2 £3,902,000.[3] The import of beet sugar had risen from 882,600 tons in 1896–7 to 1,526,000 tons in 1898–9. A countervailing duty to offset the bounties was accordingly put on in 1899 to protect the Indian producer against the competition of bounty-fed sugar. The growing import of petroleum was also an interesting feature, its value rising from £1,794,000 in 1892–3 to £2,558,000 in 1901–2.[3] As this was mainly for lighting purposes, motor-cars being quite exceptional at that date, both the increased import of sugar and mineral oil point to an increased consumption and a rise in the standard of living. The same thing is borne out by the increase in metals, which rose from £3,620,000 to £4,599,000 in the same period. This figure is exclusive of hardware, machinery, millwork, and railway material, and the increasing import is ascribed to the substitution of copper and brass for the earthen cooking pot. The increase in machinery and millwork from £1,573,000 to £2,004,000 points to the growth of the Indian factory and the demand for equipment.

The Government also imported on its own account railway plant, metals, and military stores, the value of which was £2,440,000 in 1892–3, and £4,841,000 in 1901–2.

While the trade with all European countries constituted in 1901–2 about 63½ per cent, the proportion of that taken by the United Kingdom had declined during the decade from

[1] *Moral and Material Progress*, 1903, p. 232.
[2] *Moral and Material Progress*, 1882–3 (1885), p. 218.
[3] *Moral and Material Progress*, 1901–2 (1903), p. 243.

47·4 per cent of the whole to 40·6 per cent. China occupied the second place in 1901–2 (£12,986,000), which was 9·5 per cent, and Germany came third with 6·4 per cent, amounting to £8,810,000. The trade with the United States was £6,379,000, and her proportion rose from 2·9 to 4·6 per cent. While the Straits Settlements still did 4·4 per cent of the trade, £5,997,000 in 1901–2, the most striking rise was that of Japan. From the ·8 per cent of 1891–2, the Japanese share of Indian trade rose to 3·7 per cent in 1901–2, the amount being £5,118,000.

One of the great difficulties of the period was connected with the exchange. The standard coinage of India was the silver rupee, and that fell rapidly in comparison with gold. Up to 1871 ten rupees of Indian money would exchange for an English pound sterling. From 1873 onwards the rupee sunk in value, till in 1893 it was a fraction of a penny over 1*s.* It occasioned deficits in the revenue and made it necessary to increase taxation and stint expenditure because so much of the interest on the capital borrowed had to be paid in gold. In two years, 1891–3, nearly 450 lakhs of rupees had to be raised in India to make up the loss on the exchange. Such violent fluctuations hampered mercantile enterprise and restricted the investment of capital in India since the interest to be paid in gold meant that a larger profit had to be earned in silver to transmit into a reasonable profit in gold, and this was not always possible to estimate. On the recommendation of the Herschell Committee the mints were closed to free coinage of silver in 1893, the idea being to fix the rupee at 1*s.* 4*d.*, i.e. 15 to the pound. As no more silver could be coined, and as people still continued to require rupees, they increased in value, and by 1898 they had reached 1*s.* 4*d.*, at which price the Government offered to give notes or gold for rupees. In 1894 arrangements were made for India to adopt the gold standard, and a gold reserve was formed in India. Since that time to the outbreak of war the rupee was fairly stable, and this facilitated trade, loans, and the purchase of stores on the Government account.

An elaborate mechanism of gold reserves and sale of Council Bills was established to prevent the fall of the rupee below 1*s.* 4*d.*[1]

During the war 1914–18, the rupee rose in value and was worth 2*s.* in September, 1919, and 2*s.* 4*d.* in December, 1919.

[1] Chamberlain Committee, 1913.

Another Committee sitting in that month tried to stabilize the rupee at 2*s*. This coincided with the after-war slump, and gave rise to much discontent amongst Indian merchants, as it was thought that the fixing of the exchange at so high a rate was an attempt to stimulate the trade of England at the expense of India as a rising exchange impedes exports and stimulates imports. During 1921–2 the rupee fell again to 1*s*. 3*d*.–4*d*.

A remarkable feature of the period after 1857 was the absorption of gold and silver that took place in India, a tendency specially marked after 1900. The average annual net imports of gold for the five years ending 1913–14, after deducting the exports, was £18,767,000. In 1919–20 it was no less than £42,261,000.[1]

Most of it was used for ornaments, some was hoarded, but only in the Punjab did gold coins come into circulation as currency.[2]

In this way India helped before the war to steady world prices which would otherwise have risen rapidly owing to the increased production of gold from the Yukon and the Rand.

The continuous surplus of the exports over the imports which had gone on since 1842–3,[3] gave rise towards the end of the century to the theory of the "Drain". Sir Theodore Morison has shown that the "Drain" of the decade 1899–1900 to 1908–9 was an average of £15,051,000 per annum.[4] This consisted of remittances to pay the interest on the loans which have done so much to develop the prosperity of the country by providing railways and irrigation works. In addition, the repayment of the capital borrowed is also met by the surplus exports, the payment for shipping services, and the remittances for pensions of Englishmen

[1] *Indian Year Book*, 1923, p. 294.

	£
Annual Average of 5 years ending 1888–9	2,297,000
" " " 1893–4	1,547,000
" " " 1903–4	4,120,000
" " " 1908–9	6,233,000

In a report on Fifty Years' Administration, p. 26, the value of the gold and silver absorbed between 1857 and 1907 is given as 6,303 millions of rupees.

[2] *Moral and Material Progress*, 1913, p. 166.

[3] "The most conspicuous feature in the foreign trade of India is the normal excess of exports over imports. Taking the forty-one years since 1842-3, the exports of merchandise exceeded the imports in every single year, the average excess being at the rate of about £16,170,000 a year." *Moral and Material Progress*, 1873, p. 215.

[4] *India in Transition*, p. 197.

who have served in India. Roughly speaking, one-third of the surplus payments in the shape of exports was for good government, one-third for the interest on the loans for the public works, and one-third payment for bullion absorbed.

In 1901–2 the interest and management of the debt was £9,387,041, and pensions and gratuities were £4,224,476 out of a total of £16,877,447, and these were payments which would have to be met by exports. The depreciating rupee increased the drain temporarily, as more exports had to be sent out to meet balance required to adjust the gold payments in Europe. As, however, the surplus of exports had continued for sixty years, and as India was obviously not retrogressing, the outcry seems to have been unjustifiable.

When one looks back on those forty years between 1858 and 1899, one realizes the change that had come over the whole economic structure of India. Of the two great uncertainties which had paralysed India for centuries, disorder had been to a large extent quelled and the effects of the weather had been, to a certain extent, mitigated by irrigation and railways. There was a phenomenal increase of population, the cultivated areas had extended enormously and a great mobility of persons and goods had taken place. All this is inconsistent with any theory of exploitation. In the era of Public Works, India had received a modern equipment. The characteristic feature of the period lay in the fact that the work was done from outside by an alien power of great engineering and organizing ability. The next period was to witness an increase of Government activity on the one hand and an increasing demand on the part of educated India to " carry on " without the paternal guidance of the English power that for a century had stood for law, order, and progress.

PERIOD III

1899—Present Day

The Policy of Conscious National Development

A. Agriculture

(i) *Tenures*

The importance of the Land Revenue and its collection.

Types of tenures. Zemindari or landlord tenures. Ryotwari or peasant tenures.

(ii) *Permanent and Temporary Settlements of the Revenue*

(*a*) Zemindari tenures and permanent settlement.

Revenue fixed in money at the time of Akbar.

Revenue farmers. Cesses. Heavy exactions.

The retention of the revenue farmers by the Company in Bengal, 1786.

Their recognition as landlords, 1793, with a permanent settlement of the revenue.

Change of ownership owing to the severity of the settlement terms.

Increase in the value of land made terms less onerous.

Sub-contracting.

Continuation of illegal cesses.

Advantages and disadvantages of the systems of temporary or permanent settlement.

The "half assets" rule, 1855.

Temporary zemindari settlements.

(*b*) Ryotwari tenures and temporary settlements.

Madras, 1807, temporarily settled for thirty years. Payment of revenue made direct to the Government.

Bombay ryotwari tenure and temporary settlement.

Punjab and North-West Provinces, joint landlord villages (zemindari) 1822 temporary settlement.

Oudh, Talukdars (zemindari). Payments of sub-owners to talukdars fixed also.

Central Provinces, 1862, Malguzars, recognized as landlords and sub-tenants protected in the temporary settlement.

Elaborate surveys.

Land often sublet by ryots.

(iii) *Tenant Protection*

Vacant land and the necessity of having loyal tenants for military musters against enemies prevented oppression.

With British security, increase of population and competition for land the tenants' position became worse.

Legislation to protect tenants.

Bengal Tenancy Acts, 1859–85.

Survey and record of rights begun in 1894 in Bihar and Bengal.

Transition from grain rents to money rents.

(iv) *The Peasant and the Usurer*

(1) Mortgage indebtedness of the peasant.

(2) Government loans, 1883, 1884, little used.

(3) Punjab Alienation Act, 1900, restrained alienation to non-agricultural classes. Other non-alienable tenures created.

(v) *Self-help. Co-operation*

1903, Attempt to start agricultural credit societies.
The Registrars.
Guaranteeing unions.
The difficulty of supervision and capital.
Central banks created to advance money, 1907 Madras, 1911 Bombay.
In 1912 Law permitting the extension of the sphere of co-operation to other activities than credit.
Success of the movement. Reduction of interest. Moral improvement.

(vi) *Scientific Agriculture*

1901, Director of Agriculture created.
1905, Scientific experimental station at Pusa. Provincial Agricultural Departments. Team of botanists, entomologists, chemists, and engineers.
Improvements in rice, wheat, oil seeds.
The problem of sugar.
Successful work on fibres, cotton and its marketing. Jute.
Tobacco, fodder, pest control, cattle diseases, agricultural engineering.
The spread of knowledge.
The subdivision of the land and the question of enclosures.

B. Industry

Industrial production for the village, the court, and the export trade.
The stagnation of industrial production at the beginning of the nineteenth century.
The importance of cotton piece goods.
The significance of the caste system for technical training.

(*a*) *Nineteenth Century.*

The development of new factory industries: Jute, Cotton, Engineering, Coal-mining, Industrial occupations connected with hides, tea, and cotton.

(*b*) *Twentieth Century.*

National aspirations towards industrial self-sufficiency. The influence of Japan. Swadeshi and its failure.
The development of steel works.

(*c*) The War of 1914–18 in cutting off supplies increased the demand for the industrialization of India.

(*d*) The Industrial Commission, 1918, advocated a new policy of industrial development by the State.

(*e*) Causes retarding Indian industrial development:—

Inefficiency and scarcity of labour. Lack of available capital. Lack of industrial leaders. No technical background. Coal. Markets.

The after-war slump and the deficits in the revenue prevented a policy of industrial development by Government. Industries made a provincial transferred subject under the constitutional reforms.

(*f*) Home Industries.

C. Tariff Policy

The Cotton duties, 1917. The Fiscal Commission.

D. Banking

Agriculture

The most striking economic event of the twentieth century in India is the emergence of a sense of nationality in a country where the divisions had been so marked and a sense of unity meant, as it had also meant in other agricultural countries such as Germany, Russia, and the United States, a new policy of economic development.

Speaking of this growing nationality, an observer who had spent twenty-five years in India could say in 1924, "Divergent though the inhabitant of Madras may be from the dweller in the Punjab in every detail of his daily life, yet both of them feel themselves to be in the great sense men of one country, men of one nation, drawn up in line against opposing powers. There is, therefore, a national India in a very real living sense at this date, though twenty-five years ago such an attribute could not possibly have been predicted." [1]

Several events coincided to produce a new epoch at the end of the nineteenth century. The excise on the cotton duties had roused the articulate portion of India. The exclusion of Indians from Natal under the Education Test of 1897 and its adoption by Australia, worked in the same direction of creating a national feeling out of a national slight. The famines of 1896–7 and 1899 seemed to justify the adoption of a new constructive policy for the development of agriculture, with the result that the period after 1899 witnessed considerable agricultural changes, and as agriculture affects by far the larger mass of the people in India, its results were widespread.

The increasing national sentiment was stimulated by the victory of Japan over Russia, since it seemed to prove the capacity of an Oriental race to rank with the Western peoples. A rapid industrial development took place in which the growth of the iron and steel trade was the most striking feature. A demand for a protectionist tariff and a constructive policy of industrial development, carried out with Government aid, became two of the chief planks in the national programme.

[1] Rothfeld, *J.R. Soc. Arts*, 1924, p. 374. Sir J. Miller said in 1912: "It is time that we revised our ideas of the unchanging East. India, at least, is changing rapidly and recent political measures have given the people a keener interest in its development and a stronger determination to play their part in influencing that development on lines of their own. There is a new consciousness of power, which will react outside the merely political sphere and quicken the pulse of the country in all its movements." "The Central Provinces," *J.R. Soc. Arts*, 10th May, 1912, 626 (*b*).

The expanding trade led to the demand for a better-organized banking system, and an extension of railway facilities.

In 1899 there came to India as Viceroy a man who was willing to give the necessary impetus to a policy of organized development both of agriculture and industry. Scientific agriculture, co-operation, the starting of Government industries, mining, railways, irrigation, and banking all felt the effects of the new spirit. The Viceroyalty of Curzon was the era of commissions of inquiry, and its outcome was the appointment of experts in all departments. The new and energetic national policy could not have been undertaken, however, had there not been a considerable surplus of revenue from the Public Works of the past, which seemed to be a guarantee for the success of a further policy of Government development.

(i) *The Land Tenure Policy*

Agriculture is by far the most predominant interest in India, and it concerns over three-quarters of the people in a country of vast numbers, i.e. 226 millions out of 319. There are only 30 cities and towns in India, with populations exceeding 100,000 people. These contain altogether a population of 7,075,782 or 2·2 per cent of the population.[1] Down the centuries the cultivator has been poor, isolated, and bound by custom. He looks to the Government to help him through disasters such as plague, pestilence, and famine. Therefore, anything that the English Raj did in the matter of land, whether it were the alteration of tenures, fresh taxation, reservation of forests, railway building, or irrigation, affected the life of the real India at almost every point. Meanwhile, during the century, the numbers increased rapidly, the vacant lands, so marked a feature at the beginning of the nineteenth century, have been occupied, except in outlying regions like Assam, inner colonization has taken place on a large scale in the Punjab, and the question has now become one of more intensive cultivation.

From the beginning of British rule, Government was concerned with the settlement of *tenures*, and the collection of a revenue from land, in the twentieth century it was obliged to turn its attention to the improvement of agricultural *methods*.

[1] *India Year Book*, 1923, p. 421.

Throughout the past century the collection of the land revenue afforded the means of administering the greatest economic interest in the country—land, and through its collectors the British Government in India came into close contact with its peoples, and had its finger on the pulse of the economic life of India. The collectors decide cases brought before them, they can remit taxation, at the periodical reassessments they can advise an increase, and through them information filters down to the cultivator. It is they who deal with the varieties of tenures in their assessments of the revenue, and help to organize famine relief. They are the biggest outside factor in the agricultural life of India.

The collection of the revenue was, therefore, intimately bound up with the life of the people, it was not mere tax-gathering.

Oriental kingdoms, prior to British rule, rose and fell, and the peasant cultivator supported them each in turn from the produce of the land.[1] The yield of the land revenue formed by far the largest item of the resources the British could control and the Government was therefore concerned with the welfare of the peasant on financial as well as humanitarian grounds. The Government and the cultivators were partners in the land, and the former took its share of the produce according to immemorial custom.

Before a land revenue can be obtained it is necessary to settle who is responsible for its payment.

Speaking generally, two main types of land tenure have been created or recognized by the Government. They are landlord or zemindari tenures, and peasant or ryotwari tenures. The former may consist of a single owner or a body of co-owners jointly responsible for the land revenue. The chief characteristic of the landlord class is that they sublet to tenants or have subordinate cultivators with some ownership rights, and throughout the past century a second task confronting the British Government was the protection of the tenant from rack-renting and eviction. When the vacant land was plentiful the competition was for culti-

[1] Sir Charles Metcalfe, writing in 1830 of Indian village communities, said: "They seem to last where nothing else lasts. Dynasty after dynasty tumbles down; revolution succeeds revolution; Hindu, Pathan, Mughal, Marattas, Sikh, English, are all masters in turn; but the village communities remain the same. If plunder and devastation be directed against themselves and the force employed be irresistible, they flee to friendly villages at a distance; but when the storm is over they return and resume their occupations. A generation may pass away, but the succeeding generation will return."

vators, and their position was favourable; with the decline of the available waste lands the competition was for land, and the position of the subordinate ranks of cultivators became worse.

Zemindari tenures are to be found as the dominant type in Bengal, the Northern Circars of Madras, a small part of Assam, in part of the Central Provinces, in the United Provinces, and in parts of the Punjab.[1] In the two latter cases the leading characteristic was that the landlord consisted of a group of co-owners. In some cases this group sublet, in others it cultivated jointly.

In the ryotwari provinces the outstanding fact was that the small cultivators paid the land revenue direct to the Government and were grouped in villages under a head man. Though there is some subletting the difficulty has been the excessive subdivision of land, the scattered nature of the holdings, and the dependence on the moneylender. The problem here is one of rural indebtedness, not tenant protection.

There was below these classes a body of agricultural labourers who up to 1843 were slaves or serfs, and the position of this class improved considerably during the past century.

The village is the typical feature of land cultivation in India, whether the overlord be a landlord or the Government. It consists of a group of dwellings with land stretching away on all sides, of which a certain portion is woodland or grazing ground and the rest cultivated fields. It has been compared to an English parish.

These village communities may have arisen in many different ways. The people who first cleared the land would probably do it jointly and would live in a group for defence against men or wild animals. Clearing the land created a title to the land. Tribal settlement, colonizing groups, joint communities of conquerors or adventurers accounted for other villages. By the eighteenth century successive invasions had obliterated old rights and created new ones. When conquerors took possession old rulers were often left in charge as revenue collectors. Officials appointed as revenue farmers became virtually landlords, grants of land were made by rulers to those whom they wished to reward, and thus layer upon layer of interests arose superimposed

[1] See map in Baden Powell's *Land Revenue*, where the different tenures are distinguished.

upon the original village. When the English began to be the supreme authority these different classes of rights were in different stages of decay, or growth, and each stratum had its definite rights of limited ownership or other prescriptive claims.

The independent villages consisted of two main types. In the one case the villagers each had their own holding and settled separately for their land revenue. Bombay, Madras, and a large part of the Central Provinces are mainly organized on these lines and the villages are known as *ryotwari*. In the other case, the joint body of co-owners are responsible, and this type is found in the North-West Provinces, Oudh, and the Punjab.

In both cases there is an area of cultivated land and waste for grazing or wood, both have the village servants necessary for their requirements who are paid in kind or by a holding of land, both have an accountant or patwari. In the ryotwari villages of the south, the cultivators have a headman to represent them, and this is an hereditary office. In the joint-owner landlord villages the families have no headman, but common action is taken in a council or panchayat. Here a separate person appointed by the Government is responsible for the revenue, and he is an innovation of British rule. In the ryotwari villages the revenue is assessed for each field, in the co-owner villages it is assessed on the village as a whole, and the co-proprietors are jointly and severally responsible. They own the waste, but in the ryotwari tracts the waste belongs to the Government.

The cultivators of the dependent villages under the zemindars or single landlords, are in much the same position as the ryots of Bombay and Madras, the chief difference being that they are not owners to the same extent. They pay the zemindar or his delegate a rent, and the zemindar pays the Government the revenue. The Government has since 1859 endowed the ryots with certain definite occupancy rights as against their landlord, and his power of enhancing rents is curtailed. In this case, between the Government and the cultivator, an intermediary or intermediaries has been introduced.

The land revenue during the past century has been settled on either a permanent or a temporary basis, i.e. in the former case the revenue, once settled, is unalterable, in the latter case the payment to be made is revised every twenty or thirty years, as the case may be. The permanent settlement

is characteristic of Bengal, Bihar, and the Northern Circars of Madras, the temporary settlement is the rule in other parts.

In 1571 Akbar attempted to reorganize the land revenue system. Although in Sind and Bengal he continued the existing systems, which consisted of a share of the grain heap, in other parts of the Empire he caused an assessment to be made on a ten-year basis and fixed cash rates representing one-third of the average yield.[1]

As the Empire declined it became more and more difficult to collect the land revenue, and the practice grew up of employing revenue farmers, who in their turn employed local agents to collect the revenues of the farmed areas. These contractors wrung what they could out of the villages, and added extra cesses to the sums due, which they applied to their own purposes. Revenue farming was predominant in Bengal, Northern Madras, Oudh, and the North-West Provinces, and when the English assumed control as revenue farmers in their turn the system had become very oppressive. In the seventeenth century the land revenues were farmed both by the Moghul Empire and in the kingdoms in the south. In Bernier's "Letter to Colbert" based on his experiences about 1656, he speaks of the abandonment of the countryside by the peasants in the Moghul dominions. "As the ground is seldom tilled otherwise than by compulsion, and as no person is found willing and able to repair the ditches and canals for the conveyance of water, it happens that the whole country is badly cultivated and a great part rendered unproductive from the want of irrigation. The houses, too, are left in a dilapidated condition, there being few people who will either build new ones or repair those that are tumbling down. The peasant cannot avoid asking

[1] Moreland, *India at the Death of Akbar*, p. 99.

The principles of division of the grain heap still held good over large parts long after Akbar's day and Mr. Baden Powell, writing in 1892, stated that in many native states the ruler still took in his revenue in kind (i, pp. 242, 269).

The method of taking revenue by the grain yield is described in Tod, i, p. 431 (1829). The share was estimated from the standing crops, but if any dispute arose the division happened after the corn was threshed. "The cultivator bribes the collector, who will underrate the crop and when he betrays his duty the watchman is not likely to be honest, and as Indian corn is eaten green the Crown may be defrauded of half its dues." An extra tax was laid on to compensate for this cheating, which was in no proportion to the quantity cultivated, and its amount was at the mercy of the collectors. Sugar cane, spices, and cotton cannot well be divided in this way and a payment is made instead.

himself the question, 'Why should I toil for a tyrant who may come to-morrow and lay his rapacious hands upon all I possess and value, without leaving me, if such should be his humour, the means to drag on my miserable existence?'" The revenue farmers, who had no security of tenure, proceeded on the principle of drawing from the soil all the money they could.[1]

In the kingdom of Golconda and the Hindu territories in the south, it was the same story of oppression. "The trade of Kayal had been ruined by official oppression; the districts round Pulicat were described as held by mean and cunning extortioners, so that the people found little security; in the same locality the governors' demands for money had driven many artisans to abscond, and in Tanjore exceptional taxation and extortion sent some hundreds of weavers fleeing to other places in the hope of securing better treatment." [2]

The general rule in the eighteenth century was to take the half of the gross produce or as much as could be got without driving the ryots to abscond into the jungle. When the English took over Bengal from one- to two-thirds of the most fertile land of India was waste.

In addition to paying the land revenue, it must be remembered that the cultivator was forced to give unpaid labour on the roads and irrigation works, which was equivalent to a labour tax, while the army consisted for the most part of unpaid feudal levies.[3]

"No ruler ever dreamt that he might not from time to time as he chose, there was no other principle, revise the assessment," [4] and the farmers exercised this right in the eighteenth century by adding cesses to the original demand. When the English obtained control in Bengal they found the revenue farmers were the uppermost grade of interest in the land, and the system of revenue collecting was for the ruler to bargain with this class for the largest sum he could get, and the farmers wrung it out of the people as best they could. There were no surveys and very little information upon which the English could found another system. The zemindar or revenue farmer was only responsible for a lump sum, and he had no wish to have rents and

[1] Quoted from Moreland, *Aurungzeb*, p. 257.
[2] Ib., p. 244.
[3] Cf. the corvée in Egypt. See p. 178.
[4] Baden Powell, i, 268.

rights entered in the village records. The English, therefore, had to trust to the men who alone could do the work.

The company could not possibly tell who owned the land and who did not, there was no guide to the system, no principle of law, and their servants who were appointed as collectors were traders and not lawyers, and at first were expected to eke out their small salaries by private trade. Supervisors were appointed to reform the abuses, and three officers were commissioned to collect information. They were succeeded by Committees of Circuit, who reported on the system in 1778, and advocated the retention of the zemindars. No other local officials could have been found to carry out the collection, and a settlement was made with them in 1786 for ten years. Then, the idea was evolved of recognizing them as landlords who would, so it was thought, have a real interest in improving agricultural conditions if they had a secure title. This was accomplished in 1793, when the zemindars became the owners of the land of which they collected the revenue. Such a procedure was all the more logical as many of the revenue farmers were descendants of old rajahs who had been kept on under the Moghuls and stood to the ryots in the position of feudal superior, having definite rights in the land. No inquiry was, however, made as to the position or rights of the ryots under the zemindars. It was scarcely realized that large numbers of the ryots were in the position of owners paying land revenue. In order to make the zemindar secure all minute inquisition as to the position of the ryots was postponed. The papers show clearly how the minds of Lord Cornwallis and his adviser, Mr. Shore, were working. They believed that the newly acknowledged landlord, with a secure title, would extend cultivation and enlarge his own receipts, that he would improve the crops, that he would grant *pattas* or leases to his tenants, that he would employ more labour in developing his estate, that both ryot and landlord would become richer and become larger consumers and so increase the customs revenue. Indeed, the administrators expected the same results as were happening in England at that time, improving landlords, larger grain yields, enclosures, a rise of wages of the agricultural labourer, and more employment. Moreover, there was plenty of waste land and competition for tenants. Why should the zemindars oppress the ryots? If they did, the latter were free to move, and land would be easily obtainable elsewhere. It was the period of optimism with regard to native races,

their capacity for rapid progress and their ability to withstand oppression.

When turning the zemindars into landowners, two conditions were laid down, first that a certain sum, based on the yield of the revenue for past years, should be paid in perpetuity to the Government, and, secondly, that cesses on the ryots should cease.

The idea of fixing a permanent amount was due to the wish to create absolute security of tenure as a basis of sure progress. It was also hoped to attach this class of landowners to the British Government, because its permanence obviously rested on the permanence of the British power. If the zemindar did not accept the settlement he was superseded by another nominee of the British, who also retained the right to sell up the zemindar if the revenue were not paid, and as a matter of fact, the terms of the settlement were so severe that in the next ten years this frequently happened, and other people were put in the place of the original zemindars. There was thus a considerable change of ownership. "In short, it may be said that by not accepting the settlements the zemindars were ruined at once, and by accepting them they were ruined after some interval. In some cases the acceptance of the settlement appears to have been even less voluntary than the reluctant acquiescence in a hard bargain. One zemindar—he was a descendant of the great Royal Raj Bullab—complained in 1797 that the collector, Mr. Thompson, demanded agreements from him and his partners, and that when he refused to give them he was confined under a guard of sepoys and prevented from bathing, praying, or eating, and thereby driven to sign an application for settlement." [1]

At the date of the settlement the revenue payments made to the British seemed to be oppressively high, and no one foresaw that they would in time become so low in proportion to the increased value of the land, especially in those districts which were undeveloped at the time of the settlement, that it would be possible for the zemindar to sublet the collection of the money and live on the proceeds without the exertion of collecting himself. Nor could it have been anticipated that the person to whom it was sublet would be able to sublet in his turn and make a profit, so that seven, eight, and even seventeen sub-holders are recorded, one

[1] H. Beveridge, *The District of Bakarganj*, p. 62.

below the other. Moreover, owing to the principle of dividing the property amongst other members of the family on death, layers of sub-holders have grown up, the rights of sub-holder A being divided amongst his three sons, who subdivided in their turn, while sub-holder B and his children did the same. The system multiplied people who lived on the margin of profit and who did nothing for the land. Owing to the growth of a multiplicity of claims the pressure for larger payments became more urgent and cesses were continued.

The Bengal Administrative Report of 1872–3 [1] gives some idea of the variety of the cesses levied at that date: "The modern zemindar taxes his raiyats for every extravagance or necessity that circumstance may suggest as his predecessors taxed them in the past. He will tax them for the support of his agents of various kinds and degrees, for the payment of his income-tax and his postal cess, for the purchase of an elephant for his own use, for the cost of the stationery of his establishment, for the cost of printing the forms of his rent receipts, for the payment of his lawyers. The milkman gives his milk, the oilman his oil, the weaver his clothes, the confectioner his sweetmeats, the fisherman his fish. The zemindar levies benevolences from his raiyats for a festival, for a religious ceremony, for a birth, for a marriage; he exacts fees from them on all changes of their holdings, on the exchange of their leases and agreements, and on all transfers and sales; he imposes a fine on them when he settles their petty disputes, and when the police or the magistrate visits his estates; he levies blackmail on them when social scandals transpire or when an offence or an affray is committed . . . On the other hand, it should not be forgotten that all this need only continue as long as the people themselves choose, but, in fact, it is the ingrained custom and is submitted to as long as it is kept within customary limits." When the tenants took objection the zemindar immediately brought suits under the Rents Acts for enhancement of rent and retaliated by measuring their lands, of which they apparently usually had more than they acknowledged. These cesses, though still common and in cases monstrous, have been considerably diminished since 1872 owing to tenantry legislation and an increased sense of power amongst the peasantry.

[1] Quoted from Baden Powell, i, 421.

By the permanent settlement the British Government lost much of the increase in the value of the land that was due to peace, order, railways, and irrigation, as well as to the growth of new crops, such as jute.[1] The ryots became worse off as population increased, and the vacant land was taken up, their payments were enhanced, they could not get other land easily, and evictions followed on non-payment. A series of Acts to protect their rights were passed between 1859 and 1885. Another disadvantage of the system of permanent settlement was that the British officials never got into touch with the cultivators in the same way as in other parts—the zemindar stood between. A cadastral survey was, however, begun in Bengal and Bihar in 1894, since which date, and especially in the making of the survey, the officials have been brought into close contact with the agricultural classes.

Although further zemindari tenures were recognized after 1793 the revenue settlement was made on a different basis, as it was temporary and not permanent.

The question of the amount to be taken from the zemindars in the temporarily settled areas came up during the century. The Bengal settlement following the older custom had envisaged 90 per cent of the rent as the correct amount, 10 per cent being left to the zemindar for the trouble of collecting. When dealing with landlords whose settlements were revised every thirty years the 80 per cent of 1822 was reduced to 72½ per cent in 1832 and to 66⅔ in 1849. By 1855 a more lenient standard of "half assets" or 50 per cent had been laid down in the Saharanpur rules of that year. This does not mean half the actual rent as other considerations such as the home farm were taken into account and the result worked out at somewhat more than half the ascertained rental. In recent years the tendency has been to go below this 50 per cent.[2]

[1] In 1900 the land revenue from Bengal was 3,98,50,637 rupees, i.e. less than 4 crores, and the rental of Bengal, Bihar and Orissa was 16½ crores. When the revenue was fixed in 1793 the Government share was supposed to be 90 per cent. On this basis it will be seen how much the payer of the land revenues gained. *Cd.* 1098, "Land Revenue System of India," 1902, p. 82.

[2] *Cd.* 1089, pp. 5–6. "In the North-Western and other Zemindar provinces prospective assets have been excluded from consideration; allowances have been made for improvements made by the landlord, for precariousness of cultivation and for local circumstances . . . The share to be taken as land revenue by the Government is thus being brought down in the North-Western Provinces to an average of less than 50 per

The advisability of extending the principle of permanent settlement to all India was discussed and was generally favoured in the sixties of last century, the idea being that it would encourage the occupation of waste land and help to relieve famines, in that certainty would cause the investment of money in the land and enable the cultivator to form a reserve hoard against scarcities. In 1862 it was decided to make all settlements permanent. This was not, however, carried out, and was definitely repudiated in 1883. Another advantage had been claimed for the system of permanency and that is that it is less expensive to the administration and less disturbing to the cultivator. The elaborate surveys and bargaining, needed before a readjustment was made, lasted sometimes for eight or ten years, and it was upsetting to people who were suddenly jerked up to a higher rate. If a man had been paying 1,000 rupees out of a 2,000 income, and had made that income into 3,000, it seemed to him a hardship to be reduced to 1,500 from 2,000 on the half assets principle, even though he had been enjoying previously 500 rupees more per annum than his share. This has been met since 1895 by the system of progressive enhancements. On the other hand, the disadvantages of the permanent system were very great. It meant that the State got no share in the increasing value of the land, and that as revenue was needed other people had to make up the deficit, while the permanently settled land-owners escaped. The close contact which is established in other parts of India between the revenue officers and the people is lacking, the surveys were lacking, and this made it very difficult to ascertain the rights of subordinate tenants and afford legal protection. Under the new cadastral survey the whole of Bihar and part of Bengal has been surveyed, and a record of existing rights carefully entered. Where this has taken place the titles and rights of the tenants were secured. But the most serious difficulty is that caused by the fall or rise in the value of money, a settlement fixed permanently on the basis of the 2*s.* rupee is a very much lighter assessment when the rupee falls to 1*s.* 4*d.* No Chancellor of the Exchequer would, or could, fix a tax permanently in a European country.

cent, while in the resettlement of Oudh, now on the point of completion, the average falls below 47 per cent." In Orissa in 1822 it was 83·3 of the assets, in 1833 70–5 per cent, in 1840 65 per cent, and at the resettlement at the end of the century 54 per cent. In the Punjab the general average was 45 per cent of the net income.

As the English dominion in India extended the next step after Bengal was to organize the land revenue in Madras. In the Northern Circars, where the previous system of zemindar tax-collecting had been much the same as in Bengal, the zemindari permanent settlement was easily established, but in other parts of the province no one who could really be regarded as a landlord could be found. Certain petty chiefs or rajahs existed who might have been made into landlords but they had revolted against the British. Captain Munro (afterwards Sir Thomas Munro) suggested an entirely new system, namely, that the settlement should be made direct with the cultivators, and as the peasant had apparently no wish to be bound permanently, not knowing what would happen in the future, that it should be a temporary settlement for a term of years only. The Court of Directors accepted Munro's suggestion in 1807. After 1812 the revenue payment was fixed for each individual cultivator and was paid by the occupier of the land to the Government, to whom the waste also belonged. The settlement was made for thirty years and the ryot was regarded as the landowner.

Bombay, in the meanwhile, came under English rule between 1803 and 1818, and the same plan of individual settlement and ryotwari tenure was adopted with this difference, that the ryot was not an owner, as in Madras, but had a permanent occupancy right under the British Government. In the North-West, however, where the idea of extending the landlord system with a permanent settlement still existed at the beginning of the nineteenth century, the Government only made a temporary settlement for three years as a matter of convenience with the aim that at the end of the fourth period of short resettlements the revenue should become permanently settled, the object being to find out, in the meantime, how much could reasonably be demanded as revenue. A commission was appointed to investigate the question, and one of the members, Holt Mackenzie, drew attention in 1819 to the existence of landlord villages, or proprietary brotherhoods, in which there was no one landlord but a corporation of landlords, all joint owners and over whom there was no one of the landlord type who could be held responsible. It was, therefore, decided to recognize this type of village and to treat with it jointly as if it were a landlord. This was confirmed in 1822. The idea of making a temporary settlement only was borrowed from Madras

and Bombay, and the term was thirty years. When the Punjab was annexed it was found that the joint village of landowners was even more prominent, and here, too, it was preserved and an arrangement as to revenue was made with the village as a whole, but the settlements were for twenty years, a shorter period being more advisable in a country so unsettled, as land was bound to appreciate with law, order, and trade. Interspersed, however, there were people approaching the status of landlords or zemindars. In Oudh, for instance, these men were in some cases descendants of the old kings who had stayed on as revenue farmers, in others they were later importations such as Court favourites, but the attempt to recognize the joint village and pass over these Taluqdars led to their joining the mutiny against the British, during which period their tenants continued to pay them rent. In 1858 a settlement was made with them on the Bengal model, except that it was only for a temporary period, and that the payments of the sub-owners below them were also fixed. In the same way, when the revenue of large parts of the Central Provinces was fixed in 1862, although a considerable area of the revenue collection was fixed on ryotwari principles, the Malguzars, who had been the revenue collectors under the Mahrattas, were recognized as having proprietary rights, but their sub-tenants were also protected by a settlement of their payments to the malguzar.

The tendency, therefore, had been for the revenue farmers to become landowners, and this the British Government was forced to recognize as in the case of the taluqdars of Oudh, even where it wished, as in this case, to introduce another system. As the settlement is temporary, there is not the same possibility of subletting on the margin of the growing profits as in Bengal, and the layers of proprietors have not arisen.

The method of assessing the revenue underwent many developments during the century. At first the idea was to take the village grain-heap as the model and assess a share of the gross produce in advance, in terms of cash. In the landlord regions the next idea, formulated in 1833, was to take a proportion of the rental as the basis. Here, the soils were classified and the basis was not the actual rental but what it ought to have been. In 1881 this ideal standard was abandoned, and the actual rent was taken as the basis.

Akbar's revenue assessment was something like double the

modern rent, and consequently it was four times or more the modern revenue, which is rather less than half the rent.[1] As the price of grain has increased considerably the revenue now demanded represents a much smaller proportion of the crop, and the collection is supervised by a competent and honest agency which was certainly not true of Oriental governments of the past.

In the ryotwari provinces there has been an elaborate survey, in which each field is set out, the soils classified, and the revenue settled separately for each field or survey number. Any alterations and changes are carefully entered on the surveys. It is the land that pays the tax, not the individual. The ryot holds direct from the Government, and his holding is transferable and hereditary. He may relinquish it to the Government after notice. There is a very complete register of title in the survey.

Owing to this elaborate system of survey and record a resettlement is now made in a much shorter time than the four years to ten years previously needed, which cost Rs. 400 per square mile and considerable harassment to the people. In 1907 it took from one to three years, and costs Rs. 100 per square mile.[2] In making the settlements allowances are made for any improvements, such as wells made by the tenants.

In the ryotwari provinces an attempt was made at first to assess according to the produce, but it was abandoned in 1862, and the alternative of half the net assets was introduced. No hard and fast rule was laid down; local considerations were taken into account at the discretion of the assessing officer.[3] The ryots frequently sublet at a rent of half the produce.[4]

As a rule the amount taken by the Government from the ryots has fallen below the half assets standard, as in the case of zemindars, and is obviously low enough to allow a sublessee to make a profit, since subletting is so common.[5]

[1] Moreland, *Akbar*, p. 131, n.

[2] "Fifty Years of Indian Administration," *Cd.* 4956, p. 9.

[3] Recently the reformed legislative Councils have endeavoured to fix by statute the principles to be adopted in the settlement of Land Revenue.

[4] *M.M.P.*, 1903, p. 150.

[5] A memorial was sent in to the Government of India in 1902 asking for the adoption of the half assets standard as a relief to the cultivator. It was shown in the Government reply, *Cd.* 1089, pp. 7–8, that if this standard were adopted it would lead to a rise all round and would cause, not relief, but increased taxation. The report from the Central Provinces showed that it would double the liabilities of the ryots and the same

In 1900–1 there were 273¼ million acres of ryotwari lands, 119¼ zemindari permanently assessed, and 199½ million acres temporarily assessed.[1]

The collection of the revenue is suspended in times of famine and in many cases remitted altogether. In the famine of 1899–1900 £1,376,000 was suspended, and no less than £1,321,000 was entirely remitted. Over £500,000 was remitted in the United Provinces in 1908.[2]

In fifty years after 1856 the cultivated area more than doubled in thinly peopled tracts like Burma and Assam, it had increased by 30 to 60 per cent in the Central Provinces, Berar, and parts of Bombay, even in the thickly peopled province of Oudh it had increased by 30 per cent. We have already seen how enormous areas have been brought under cultivation in the Punjab. Thus, the land assessed for revenue has increased, and the land revenue should also have increased considerably. Measured in rupees the increase in the revenue from land has increased 60 per cent. In the Punjab the assessment rose by 80 per cent in the fifty years between 1857 and 1907, but the cultivated area increased by 100 per cent, and so the assessment per acre actually diminished and the assessments of the Punjab were stated to be 1/10th to 1/14th of the gross produce in 1907.[3] The land revenue represented at that time an average charge of less than 2*s.* per acre of cultivated land.

Thus, the collection of the revenue has been lenient and liberal and is much less than in the time of Akbar, the supposed golden age.

When the tenures had been settled new problems arose both in the zemindari and ryotwari areas.

In the early nineteenth century land was abundant and tenants scarce and the immemorial method of self-protection on the part of the tenant was to leave the land. But he did not do this until he was oppressively treated as he had a deep feeling of affection for what he regarded as his ancestral land.

Mr. Baden Powell, in his *Land Revenue of British India*,[4]

reply came from Madras, where it was said that if the Government took one-fifth of the real gross produce from its ryots it would fully double the land revenue as collected at that date.

[1] *M.M.P.*, 1903, p. 150.
[2] *M.M.P.*, 1913, p. 173.
[3] *Cd.* 4956 (1909), "Fifty Years' Administration," p. 9.
[4] p. 137.

describes the process as follows: "Though the temptation to put a heavy rent on tenants who would rather pay than lose their dearly cherished ancestral lands was often yielded to, still, Oriental rulers and officials were extremely skilful at squeezing and letting go in time. They always knew how to stop before driving a good tenant to despair. Only a few villainous tyrants and land contractors who had a temporary chance acted otherwise. Unfortunately, however, the tenant class came to acquiesce in a state of things that kept them in a perpetual state of bondage; living near the edge of necessity on a bare sufficiency with no surplus, they had to work for their lives and could have but small enjoyment in them."

Moreover, in the disturbed conditions prevailing before the British era, the tenants had to fight for their landlord, and it was not merely as cultivators, but as warriors, that they counted. When the landlord might expect to have to muster every available fighting man at no distant day he would not unduly alienate the possible defenders. During the century the British kept the peace and the fighting man was no longer an asset to be considered, and as population increased the competition for land became heavier and the position of the tenant became progressively worse.[1]

In Bengal the increase in the value of land had resulted in continuous subletting of the right to take rent, and the tenant's position became progressively harder as each layer of sub-lessees tried to make their profit out of him. No protection had been afforded to the ryot at the permanent settlement in 1793 because at that time no protection was needed, although Lord Cornwallis had intended that the ryot's tenure should also have been recognized and confirmed. Where payment of the rent in grain still held good all sorts of extra demands were made, as, for instance, a demand for compensation for the extra amount of dust supposed to be contained in the grain, and so on.

The Directors recorded at the time of the Mutiny that the sub-proprietor had virtually become a tenant at will, who could be evicted if he would not pay a higher rent. He was, as a matter of fact, being mercilessly squeezed. The practice was to serve an ejectment order and to put the land up to auction and let the highest bidder take it over. As the peasants knew no other occupation than land they bid

[1] Sir T. Morison, *Industrial Organization of an Indian Province*, chap. iii, "The Competition for Land."

wildly against one another with consequent rack-renting. The peasant was accustomed to acquiesce in being kept on the margin of starvation and was quite unable to protect himself. Thus, the Indian Government was obliged to devise a scheme which interfered with the sacred rights of property, so rooted a belief in the first three-quarters of the nineteenth century. This is another instance of the way in which India dealt a blow at *laissez faire* theories. The optimism of the early period had to give way to legal regulation. There thus began a series of most interesting social experiments in land legislation for the protection of the tenants which twenty years later were applied to Ireland.[1] The Bengal Tenancy Act led the way in 1859. If a man had occupied land for twelve years he could not be evicted, and rents could not be raised save by a decree of the Court or mutual consent. It was found that the Act was evaded by making tenants change their plots before the twelve years expired, or by evicting them altogether, and in 1885 twelve years' occupancy of land in the village area gave a tenant right which was hereditary. These Acts caused a great deal of litigation as the zemindar carried the case from the land officers up to the High Courts, and here the ryot was at a disadvantage as he had not the capital to fight the appeals.[2] It was found that it was impossible to secure the rights of the tenants without a survey and record such as already existed in the ryotwari areas, and this was begun in 1894. By 1911 over 80 per cent of the tenants had become settled ryots with an occupancy tenure under the Act, and the other tenants were protected by law in various ways. Nevertheless, in order to avoid the harassment of lawsuits, the tenants are still willing to pay illegal "cesses" above their legal rents.

During the 'eighties practically all the provinces in India passed laws to protect the tenants and fix rents either by a Court or by the Settlement Officer, who does it automatically in those parts of the Central Provinces which are under malguzars, in order to ascertain what proportion of rent the malguzar should pay as revenue to the Government. These Acts are constantly being amended and extended so as to prevent evasion.[3]

[1] Gladstone studied the Indian Acts before bringing in his Irish Acts.

[2] In Agra, in 1911–12, the total number of suits under the Act was 385,014, in Oudh 94,285. *M.M.P.*, 1913, p. 185.

[3] Agra Province, 1881, 1898, 1901; Central Provinces, 1889, 1898; Oudh, 1886; Madras Estates, 1908; Bengal, 1907; Chota Nagpur Tenancy Act, 1908.

The general result has been that the tenant now has fixity of tenure, that in most cases his rent cannot be enhanced without an appeal to a rent court or settlement officer. If ejected for non-payment of rent the ryot is entitled to compensation for any improvements.

One of the most interesting developments during the century has been the transition from grain rents to money rents. Writing of the United Provinces Sir T. Morison said: "In 1830 Mr. Boulderson wrote that rents over four-fifths of the district of Morshedadabad or 80 per cent of the cultivated area were taken in kind. At the revision of the settlement by Mr. Alexander in 1881 he found 64·3 per cent of the land cultivated by tenants paying money rents instead of only 20 per cent, and this does not take into account commutations effected by him. In 1863 the Government had enacted by law that either tenant or landlord could claim a forced commutation of rents from kind to money," [1] and this provision was so largely made use of that grain rents have become exceptional. This was facilitated by the enormous importation of silver. The diffusion of coined money and the progressive absorption of coin by India is no doubt chiefly due to this substitution of coin for barter or payments in kind, and there has been a rapid transition from a natural to a money economy.

In the ryotwari provinces the tenant had been given the right to transfer his land, the idea being that if a man did not cultivate properly he would fail, and his land would get into the hands of someone who would farm better, and in this way the weak would be eliminated and the enterprising succeed. The great thing was to provide every facility for the transfer of land. The result was, however, to encourage mortgage indebtedness, as it is typical of small peasants everywhere to borrow up to the limits of the credit they can obtain. In many cases the ryot became a sort of bond-slave working for the village grain dealer, who was also the village moneylender. Famines increased the peasant's indebtedness, but the general causes of his indebtedness were the loans made for a marriage or for litigation, i.e. for unproductive expenditure, though money was often borrowed for seed-grain and plough oxen. There was a tendency, for instance, for marriages to become more elaborate since the land being worth

[1] Sir T. Morison, *Industrial Organization*, p. 53. In chap. iii the relative advantages of grain rents and money rents are discussed.

more the peasant could borrow more, hence a greater display. Marriage expenses among the Lewa Kunbis in Gujarat were said to have risen from Rs. 500 to Rs. 1,000 in the years since 1870. In Madras Rs. 200 was said to be a common outlay for a wedding in an ordinary ryot's house.[1]

It has been said that in India capital is supplied in small sums by small capitalists to men of small commercial intelligence. "There has been on the one hand excessively wide credit and on the other excessively dear money."[2]

In Faridpur the interest taken was 30 per cent and often 48 per cent, and this was added to the principal every year and a fresh bond taken. Nearly half the debt was the result of compound interest.[3] In that district the average income worked out at something like 52 rupees a head, the average debt at 11 rupees and the taxation at $2\frac{3}{4}$ rupees in a population (1911 census) of 2,122,000 people.[4] In the Punjab Sir James Wilson calculated that the amount of money the cultivators borrowed was something like 10 millions sterling every year. The population of the Punjab was about one-fifteenth that of India, so that, according to that estimate, the male agriculturists of India had to borrow something like 150 millions sterling every year and pay 15 or 20 per cent interest on it. The high rate of interest was a tremendous burden on the prosperity of the smallholders.[5]

"The indebtedness of the ryot is no new thing; Munro in Madras and Elphinstone in Bombay showed at the beginning of the nineteenth century how utterly sunk in debt the ryot was; nearly all the ryots said they depended on the moneylender for maintenance from crop to crop; the whole of the surplus produce went to the moneylender as payment of interest; as for the payment of the principal, it never entered their heads."[6] Similar evidence was given by Holt Mackenzie in 1832 before the Select Committee on the affairs of the East India Company.[7] But in earlier days it did not pay the usurer to foreclose.

[1] *M.M.P.*, 1903, p. 354.
[2] *M.M.P.*, 1913, p. 248.
[3] Jack, *Economic Life of a Bengal District*, 1916, p. 101.
[4] Ib., 137.
[5] *J.R. Soc. Arts*, 3rd February, 1911, p. 276, speech on a paper on "Banking in India", Murray.
[6] Sir F. Nicholson's *Report on Land and Agricultural Banks*, i, p. 241, quoted Morison, *Economic Transition*, p. 79.
[7] Ib., p. 79.

As, however, the British Government created a valuable interest in land by reducing the revenue assessment, and at the same time created facilities for transferring land, it often paid the moneylender to foreclose and realize. The increased value of the land on the one hand made it easier for the ryot to borrow, on the other it made it more desirable for the moneylender to sell him up and gain possession of it. Serious riots against the moneylenders broke out in 1875 in the Deccan.

The Government was willing to advance loans under two Acts, the Land Improvement Loans Act of 1883 and the Agriculturists' Loans Act of 1884 (takavi loans), and these proved especially useful to set things going after a famine. The rate of interest was 6¼ per cent, as against the 12 to 24 per cent of the village moneylender. But the Government loans entailed scrutiny; they were only advanced for special purposes and not for a marriage, and they have had little effect on the general position of indebtedness, though the total outstanding on 31st March, 1912, was £2,447,659.[1]

The bulk of the moneylenders, especially in Madras, were ryots themselves,[2] but in other cases they belonged to non-agricultural classes. There was, therefore, a transfer of land going on from the cultivating owner to the moneyed classes.

As the ryot had shown himself so helpless in the matter of retaining his land, an important new departure was made in 1900, when he was simply restrained from alienating it in the Punjab to non-agricultural castes by the Punjab Alienation Act, 1900. There was in consequence a difficulty in getting credit, but also a considerable reduction in extravagant expenditure. Mortgages, if they contain a foreclosure clause, are prohibited by this Act. Thus, even another agriculturist cannot foreclose if he lends. The Act was extended to the North-West Frontier Province in 1904, and in Oudh the Bundelkund Alienation of Land Act, 1903, was also an extension of the principle of the Punjab Act. Here, too, it was said, in 1911, that the agricultural classes were beginning to exercise economy

[1] *M.M.P.*, 1913, p. 249.

[2] *M.M.P.*, 1903, p. 354. "Of 83,000 documents examined relating to registered loans in Madras, 73–85 per cent of the money was lent by ryots according to the various districts. The vast mass of loans unsecured by any document was even more largely lent by ryot to ryot. The same is to a smaller extent true of other provinces."

in marriage ceremonies because they could not get loans so easily as before.[1] In Bombay, in 1901, a special tenure was created by which certain lands could not be alienated without the previous permission of the collector. "The conditions of the non-alienable tenure are designed to meet the circumstances of the wild tribes, the depressed castes and other classes of cultivators who are known to be backward or improvident." [2]

Thus, one of the most important changes of the new era was the restriction on alienation and the creation of non-alienable tenures.

All the measures previously enumerated were due to the initiative of the British Government and it was obvious that the impetus to self-improvement was lacking. The history of the protective land legislation is a long story of evasion and the attempt to prevent it. The great thing was to try to get some form of self-help into the people themselves. A report on rural indebtedness and its remedy was published by Sir F. Nicholson in 1895, and it showed that the state of debt bondage had been common in European countries throughout the whole century. The way out had been found in Germany in the Raiffeisen banks or agricultural co-operative credit societies. Small groups of German peasants, following the ideas of the Burgomaster Raiffeisen, had bound themselves together and had guaranteed each other's loans. The liability was unlimited. As each man knew the other and his circumstances, and as each man was liable for the whole debt, the loans were likely to be made with discrimination. These societies soon bound themselves together to promote large credit establishments from which they could obtain the money they required. In addition, other co-operative societies arose for buying seed, manures, and implements and for the joint sale of produce.

With the new spirit abroad in the twentieth century in India the idea of starting co-operative societies was taken up, and a committee was appointed by the Government in 1901 to consider the whole subject. In 1903 an Act was passed "to encourage thrift, self-help, and co-operation among agriculturists, artisans, and persons of limited means".

[1] *M.M.P.*, 1913, p. 185.
[2] Ib., p. 188. 2,191 square miles were so held on 31st July, 1911.

The initiative had to be taken by the Government, which had to appoint an officer—the Registrar—to persuade people to form societies, advance some money for a start, exempt the societies from certain taxes and fees, and provide someone who could audit the accounts. The Act of 1903 merely envisaged local credit societies and authorized the creation of provincial registrars to give their services to help with the business side. The registrars were the guides, philosophers and friends of the movement. They had to arouse public interest, persuade the peasants to join, frame by-laws, determine future developments, inculcate business management and brotherly spirit. It is, however, typical of India that so much initiation had to come from above, whereas the whole idea of the co-operative movement is that the work should be done by the people themselves.

The great difficulty has been in the supervising of little village societies. It has been met in Burma and Bombay, for instance, by the formation of Guaranteeing Unions supervising the others.[1] It was hopeless to find capable and trustworthy persons in every village who could undertake the business of running a co-operative society. There was also a difficulty in getting capital, although the Government was willing to advance a sum equal to the deposits of the members. The necessity of some centralized system of banks which should make loans and supervise the societies was obvious. Two types of societies had emerged. One was modelled on the Raiffeisen method of a small share capital contributed by the members in instalments,[2] and this was the principal form developed in the Punjab, Burma, and the United Provinces. In Bombay, Bengal, and the Central Provinces the Luzzatti method was followed, in which no share capital is required, only a membership fee, and membership is, as a rule, open to every class and caste. In some cases the societies are confined to a particular community or particular type of employment. Part of the working capital is raised by deposits from members.

By 1912 it was clear that the Indian villagers would co-operate, that unlimited liability was not the bugbear

[1] Ewbank, *Co-operation in India.*

[2] In the United Provinces the shares were 20 rupees and were paid for in half-yearly instalments of one rupee. The village societies paid 12 per cent to the headquarters bank and re-lent at 15 per cent to the borrowers. *J.R. Soc. Arts*, 1924, p. 382, Fremantle.

that some people feared, that the societies were being formed and that the movement was likely to grow beyond the original credit societies. A central bank had been started in Madras in 1907, and in Bombay in 1911, to finance agricultural societies. The result of the success of the movement was the obvious need for its regulation on extended lines, and the original Act was much enlarged in 1912. The societies were to be grouped as in Europe for the supply of central funds, and the scope of co-operation was extended beyond the provision of credit to the purchase and sale sides of agriculture or industry as in Europe.

Further experience has proved that the loans are almost entirely lent for productive purposes and not, as was once feared, for marriages, that the loans are repaid and that State aid in the form of money doles has now become the exception. The activities of the co-operative societies have been extraordinarily varied, but in no direction have they been more useful than in promoting sanitation, irrigation, and in popularizing improved methods and the distribution of seed. They have in some cases started dispensaries, built new roads and opened schools. They have proved to be not merely an economic but a moral force. "In Bombay, in the small village of Khandesh, the head of almost every family in the village is a member of the society. The old debts of members have been paid off; not a single member borrows from moneylenders . . . For more than ten years not a single civil or criminal case has gone to the Courts from Mahaswa, the disputes being settled within the village itself. The mere fact of the society's existence has, moreover, forced the moneylenders of the neighbourhood to lower their rates of interest to all." [1]

In Bombay, in addition to the agricultural societies, other societies have been formed for the sale of raw cotton, the sale of grain, the working of co-operative cotton gins, for cattle insurance, and for the supply of manure and agricultural implements.[2] Even co-operative workshops of coppersmiths, salt-owners, cobblers, and foundry-workers are setting up business. In the Punjab the Co-operative Department "has collected a library on rural economics

[1] *M.M.P.*, 1923, p. 212, from which the following particulars are also taken.

[2] Twenty-six societies existed in 1920 to supply manures, 19 for seed, 13 to provide implements, 8 dairy societies, 14 for cattle breeding, 4 for cattle insurance, 18 for the sale of cotton. Keatinge, *Agricultural Progress in W. India*, p. 131.

which will compare favourably with any in the world". Here the total working capital of agricultural societies rose in 1921–2 from Rs. 221 lakhs to 253 lakhs. In the Punjab one type of co-operative society is trying to settle disputes by arbitration instead of by the costly lawsuit, and another type is trying to consolidate holdings so that the bane of the scattered strips can be avoided by common working. In Bihar and Orissa members have been able to redeem their land and swell their income by the purchase of additional land or cattle. The movement has enormous potentialities for national uplift. At the end of 1922 there were 52,182 societies of all kinds, i.e. 19 societies for every 100,000 inhabitants. The total all-India membership in 1921–2 amounted to 1·9 million members and the capital to Rs. 1,787 lakhs, while the profits were over Rs. 61 lakhs.[1] It has, therefore, only touched the fringe of the vast population as yet, and it seems to be the richer peasants who have chiefly benefited. The reason is that it needs such an enormous staff to get at the villages and demonstrate the value of co-operation.

"If cultivators have to learn the value of the societies they must at least see them in operation, which cannot be expected while societies are confined to ten centres in a district of 4,000 villages where communications are defective and the villagers rarely go far from their homes."[2]

Nor have the co-operative credit societies ousted the moneylender, even where they exist. There has been a good deal of delay before the cultivator could get his money, and so he resorted to the sowkar as usual. The societies often limit the amounts the would-be borrower can obtain and so again the moneylender comes in. There is a good deal of apathy and unpunctuality in the repayments, the societies are unable to meet sudden demands as the banks take some time to remit the money, and the societies have no facilities for keeping money and cannot receive small and gradual repayments. In the scarcity years of 1918–19, the Government had to come to the assistance of the Apex Co-operative bank in the Central Provinces, and it is not yet certain whether the centralized banks will stand a bad season. The fact that the banks are known as the "sirkar's banks" also militates against the success of the movement, as those who would naturally lead in forming and managing credit

[1] *I.Y. Book*, 1923, p. 510.
[2] Jack, *Economic Life of a Bengal District*, p. 107.

societies are often "non-co-operators" and will not do anything to help what they look on as a Government movement. Credit has, however, been cheapened and the agriculturist can borrow at 9 to 18 per cent, instead of 20 to 75 per cent as formerly. It has been calculated that the agriculturists are saving interest to the extent of from 40 to 80 lakhs of rupees in interest and the moneylender is not the terror he previously was.[1] Business habits as well as thrift have been inculcated. As the work has developed the need for trained secretaries has been so keenly felt that training classes have been organized in the Punjab and the Bombay Presidency.

Agricultural Methods

Another movement, which is full of promise for India, was the development of scientific agriculture after 1905. As three out of every four persons in India gain their livelihood from the soil, and as with the increasing population the size of the holding is getting smaller and more uneconomic, it is important to increase the yield if possible.[2] As in other parts of the Tropics, the Indian cultivators possess little or no capital which they can put in the soil, they work with primitive implements, cannot get a change of seed, cannot afford manures, have no knowledge of any other method of cultivation, and are profoundly distrustful of new methods. Moreover, any change involves other changes—deep ploughing not merely means a different type of plough but a radical alteration in the cattle required to pull the plough as Indian oxen are not strong enough to pull heavy ploughs. This would mean scrapping the vast cattle population of India, which is impossible. Deep ploughing

[1] *M.M.P.*, 1923, p. 212.

[2] In the ryotwari areas of Madras the average size of a holding does not exceed 8 cultivated acres, while in the more thickly populated areas of Bihar under the zemindari system the tenant's holding averages less than half an acre. *M.M.P.*, 1913, p. 224.

In 1901 nine-tenths of the rural population were so closely connected with the land that they might be called agricultural. Out of the total population of 294 millions (1901 census) the following were the numbers engaged in agriculture.

(1)	Care of Animals	3,977,000
(2)	Agriculture.	
	Landholders and tenants	152,684,000
	Agricultural labourers	35,409,000
	Growers of special products	2,629,000
	Agricultural training and supervision	970,000
		195,668,000(ib., p. 223).

would also necessitate more manure to keep the soil moist, and as the Indian uses dung cakes for fuel, animal manure cannot be spared. The clods would need breaking up were the ground more than scratched, and as the Indian cultivator could not afford a clod breaker his land would be useless to him. Thus, he does what he can under the circumstances and expands if possible to new land.

There has come in all European countries a time when the vacant land gets used up and the agricultural peoples of each region have been forced to get more out of the land they hold. As long as there is vacant land there has never been intensive agriculture in any country. In Western Canada to-day wheat growing is simply wheat mining, in the United States the virgin soil has been exhausted by continual cropping, and the farmer moved on and got more vacant land to exploit. In France the peasants made the French Revolution to get the vacant land of the seigneur or overlord, and when that was allotted they settled down gradually to intensive culture. In Russia the hunger for more land was so strong that the peasants took the remaining nobles' land in 1918 when encouraged to do so by the Bolshevists. In the United States and Canada virgin land is also within sight of exhaustion, and the agricultural colleges are doing their best to get the farmer to adopt mixed farming and more intensive methods. Everywhere the problem is, or has been, the same. Peasants will not cultivate intensively as long as there is vacant land to be had.

England solved the problem of an insufficient yield by enclosing the scattered strips of the open fields in the nineteenth century, and formed large farms where capital was invested and the output scientifically produced. With her increasing industrial population she began to rely mainly on imported grain after 1870 and specialized in the perishable things like milk, fruit, and vegetables.

How important this question is for India may be seen from the following account of so great an authority as Sir T. Holderness, writing in 1911 : [1]

" The total population of India, including that of the protected native states, is three hundred and fifteen millions. Three-fourths of this vast population is supported by agriculture. The area under cultivation is not accurately known

[1] *Peoples and Problems of India*, p. 139.

as the returns from the native states are incomplete. But we shall not be far wrong if we assume that there is less than one acre of cultivated land per head of total population, and not more than one acre and a quarter per head for that portion of the population which is directly supported by agriculture . . . Not only does the land of India provide food for this great population for, with the exception of some sugar, no food is imported from other countries, but a very considerable portion of it is set apart for growing produce which is exported. India supplies the whole world with jute. Its cotton crop is the second largest in the world. It sends abroad very large quantities of rice, wheat, and oilseeds. In fact it pays its bill for imports of merchandise and treasure and discharges its other international debts mainly by the sale of agricultural produce. Subtracting the land thus utilized for supplying foreign markets from the total area under cultivation we shall find that what is left over does not represent more than two-thirds of an acre per head of the total Indian population. India, therefore, feeds and to some extent clothes its population from what two-thirds of an acre can produce. There is probably no country in the world where the land is required to do so much."[1]

Under these circumstances it is obvious how important an increased yield in any shape or form must be. In the West the development of scientific agriculture in any country has always meant an agricultural revolution, and with the development of co-operative societies and scientific agriculture India, too, seems to be on the brink of her agricultural revolution. The railways, as we have seen, are gradually breaking up the immemorial self-sufficiency of the village, and are creating new markets, the co-operative societies are inculcating self-help, and scientific agriculture seems to be about to produce better yields.

Throughout the nineteenth century, the policy of the company and the British Government was the preservation of the ryot and the system of village cultivation. England made no attempt to introduce the system of large-scale capitalist farming into India. In Assam and in a few places in the South the carving of large estates out of the jungle was, however, encouraged, and that meant peopling of

[1] It is also a striking fact that the amount of labour employed per acre is phenomenally high. The census of 1911 showed one person to every 2·6 acres of land, while the corresponding figures were one to 17·3 in Great Britain and one to 5·4 in Germany. *Industrial Commission*. p. 53.

waste lands, as coolies had to be imported. The Company had refused to allow British settlement in India for agricultural purposes. Not till after 1833, when it became an administrative agent of the British Parliament, was colonization by white people permitted. Large-scale capitalist undertakings need transport, and the lack of transport prevented investment in land. Some 600,000 acres of waste land were, however, alienated in the United Provinces to both English and Indian "undertakers". These lands needed irrigation and reclamation and it was hoped that the lands so reclaimed would be a sort of object-lesson.

Nor did the Company or the British Government attempt to interfere with the methods of farming in vogue. No "forced cultures" were introduced as in Java, partly because England hoped that with security personal initiative would itself improve the methods in use, and, after all, both jute and cotton were developed by the ryots. She recognized and systematized the land tenures in existence and then honestly expected that other beneficial results would follow, another instance of the optimistic outlook with regard to native races prevailing in the first half of last century.

Agricultural improvement was, however, disappointingly slow. At first people, arguing along Arthur Young's lines that the magic of property turned sand into gold, believed that once security of tenure was established there would be a marked increase in prosperity. This, as we have seen, did not happen, the increase of population, rising rents and the resort to the usurer were the chief results. But there was an extension of the area cultivated owing to the great growth of numbers once security removed the check of war.

Then it was hoped that the roads and railways by creating new markets would lead to great specialization and improved methods of cultivation. More land was again taken up, but no appreciable improvement in methods followed.

Then it was hoped that irrigation works would prove the salvation of Indian agriculture, but although they have done wonders in the areas which have been developed, they still did not affect the great mass of the cultivators, the majority of whom live in non-irrigated areas or areas irrigated by wells.

The twentieth century, however, witnessed a new departure in the beginning of scientific agriculture under Lord Curzon.

Agricultural Departments had been created in the various

provinces in India in the eighties as part of the famine prevention schemes, and their functions consisted chiefly in obtaining accurate information rather than the improvement of crops.

The Imperial Department of Agriculture in the West Indies, founded in 1897, had given a stimulus to scientific agriculture throughout the British Tropics. Experiments carried out on Mendelian lines in England and elsewhere had shown that plants could be deliberately created with certain qualities, if scientifically crossed. The result was that the Government of India, too, took the matter up and appointed an Inspector-General of Agriculture in 1901 and reorganized the Imperial Agricultural Department to co-ordinate the work done in the various provincial agricultural departments. An agricultural college was founded at Pusa, in 1905, part of the money being given to Lord Curzon by an American, Mr. Phipps, and £133,000 a year was set apart for the development of agricultural experiments, research, and education. A staff had to be recruited from Europe whose task was to learn Indian conditions, and Indian assistants had to be selected and trained. Three things were necessary: firstly, the knowledge of what ought to be done, i.e. experimentation; secondly, the spreading of that knowledge; and thirdly, making it possible through irrigation, ploughs, and other aids to agriculture, that this knowledge should be carried out by cultivators. The most practical method of improving the yields was to isolate a good strain of seed and distribute it. There were no seed merchants or nursery gardeners in India, the seed went on being used in each village from the same stock year after year, and had often deteriorated. The first task was for the scientists to work out better varieties; for the provincial agricultural departments to test them in demonstration farms to find out whether they were suitable for the particular areas; and for farmers to be persuaded to grow the seed and resell to the Government for general distribution. The next task was to demonstrate on local plots the improved yielding capacity of the seed. There then existed the central scientific experimental station at Pusa, and the provincial Agricultural Departments also acclimatizing the new varieties of seed and working at local problems such as fibre in Eastern Bengal or "planting" in Southern India. The work is co-ordinated in annual meetings in which programmes

of agricultural work are drawn up. By 1912 there were over 40 scientific posts—mycologists, entomologists, cotton specialists, economic botanists, and agricultural chemists. To these were added later agricultural engineers to advise cultivators as to engines, pumps, machinery, and repairs. It was part of their task to sell the machinery and even to provide the spare parts, since no agents found it profitable enough to penetrate the villages.

Of the food crops, rice is the most important, and here the yield has been increased by better strains, one strain in Madras yielding no less than 3,771 lb. per acre, the net profit being £23 per acre for the crop.[1] The demand for the improved seed now far outruns the supply. "If the rice crop can be improved throughout the country in something like this measure it will enhance the prosperity of a larger proportion of the people of India than can be effected by the improvement of any other crop, for it occupies a larger area and is used as a staple food by a greater percentage of the population of the country than any other stock." Yet the average yield of rice per acre is only about half what it is in Japan.[2]

Indian wheat was not a good-quality wheat and fetched low prices. The Agricultural Department has begun to improve the wheat grain, the straw, and the rust-resisting qualities, and demonstrated that wheats with the best milling and baking characteristics could be grown in India. About 241,000 acres in the United Provinces were sown in 1922 with the type of seed originally bred at Pusa and the profit per acre is estimated to be £1 sterling. In the Punjab it occupied 772,800 acres. Pusa wheats have been exported both to Australia and Hungary.

Improved methods of cultivation were also devised which increased the yield. The idea is to get a large area sown with one type of wheat only so that the trade could know what they were purchasing without local mixtures.

Among the oilseeds great success has been attained with ground nuts. New varieties have been introduced, and the culture successfully extended into the dry zone of Upper Burma.

Sugar is one of the departments where most improvement is necessary, as India imports large quantities of sugar; in 1916–17, £10,300,210. Native sugar is largely

[1] *M.M.P.*, 1923, p. 149.
[2] *Industrial Commission*, referred to henceforth as *I.C.*, p. 53.

eaten in the form of gur or gul. This is made by the grower, who simply boils down the juice without removing the molasses and the result is a brown sweetmeat containing about 50 per cent of refined sugar. White sugar is not made by the grower. Although India has a larger acreage under this crop than any other country in the world—in 1913–14 it was 2,659,800 acres—the yields are very inferior, being only ten tons of stripped cane per acre as against 40 tons in Java.[1] In the case of sugar cane a special experimental station has been set up at Coimbatore in Madras, where new types of seed cane have been evolved. One of the chief difficulties here is not so much improved varieties as the necessity for improved methods of cultivation and crushing. The bullocks are often too weak to extract the juice properly. Small power-driven mills do the work of six pairs of cattle working six bullock mills, but as the bullocks can only be worked five to six hours a day, and as the power mill can be driven night and day, these mills will do the work of 24 to 30 pairs of bullocks. Where used they have increased the value of the product by 25 to 30 per cent, particularly as the crop can be promptly handled when the sugar contents are greatest. The Government has a large crushing mill of its own at Coimbatore. Several co-operative societies have installed these power plants, and others have been installed at State expense. A Sugar Bureau has been established at Pusa with the object of giving advice to growers, and it is proposed to set up a Sugar Research Institute. A sugar corporation has been floated with five crores of capital to extend sugar cultivation on a commercial scale.

While improved varieties of cane will do much for improved sugar production, agricultural engineering in the shape of improved crushing is equally important, and so are such questions as deep ploughing, manuring, and water, as sugar needs intensive cultivation. The problem of better varieties is only one of the many aspects of improved sugar growing.

Of the fibres, cotton has attracted most scientific attention. Here, too, India lags behind, the output in 1917 being 98 lb. of ginned cotton per acre. The United States of America

[1] *I.C.*, p. 53. The Sugar Committee which reported in 1921 pointed out that sugar production in India was 1·07 tons per acre, 1·96 in Cuba, 4·12 in Java, and 4·61 in Hawaii. As the Indian estimate includes gur the discrepancy is far wider than the figures show.

produces, however, nearly 200 lb. and Egypt 450 lb.[1] The Indian cotton area has expanded rapidly, 9,610,000 acres in 1900–1 becoming 14,568,000 by 1911–12 and 23,070,000 by 1919–20. The indigenous types of cotton are short and coarse, and these produce more per acre and ripen quicker and are preferred by the cultivator, especially as there has been, hitherto, no market for long stapled cotton in India itself. New varieties have been imported, some, such as Cambodia, being a great success. Indigenous cottons have been selected and improved—the idea being both to increase the yield and to get a longer staple. Here the distribution of good seed played at first a leading part. There were in 1912 about 100 seed farms capable of producing one million pounds of seeds. These farms did not belong to the Government, but the work was controlled and supervised by the Agricultural Department. By these means the quality of the cotton crop is being revolutionized. Cotton seed sufficient for 300,000 acres was distributed in 1923 in the Central Provinces alone.[2] The selected type known as 4 F. is worth £1 an acre more than the local kinds, and the extra profits represented by the rapid spread of this seed amounted to well over half a million sterling. Although the output is low, it had risen from 76 lb. per acre to 101 lb. by 1919–20.[3]

After seed the next most important step is marketing. An Indian Central Cotton Committee was set up to advise the Agricultural Department and the Cotton Trade, and a levy of two annas a bale was authorized by the Indian Legislative Assembly in 1923 to promote agricultural research in cotton growing. It is in marketing that the Co-operative movement is proving so valuable. The produce of the Indian cultivator comes to market in a dirty adulterated state, the result is that but a small price is offered to cover the risks, and good cotton does not fetch a much higher price. When co-operative societies exist, they can arrange for better collection, grading, and higher price for good staple cotton. No less than eighteen such societies for the sale of cotton alone existed in 1920 in Bombay.

Experiments have been conducted with jute and a new variety, which yields 25 per cent more, has been the result, the

[1] *I.C.*, pp. 53, 317.
[2] *M.M.P.*, 1913, p. 237.
[3] *M.M.P.*, p. 152.

net increase revenue to the cultivator being Rs. 50 lakhs a year.[1]

Improved types of tobacco have also been evolved, and seeds sufficient for about 60,000 acres supplied to cultivators. These, too, are said to yield fourfold.

Silk nurseries are being established in Bengal by the Provincial Government. These can be drawn upon for a better type of silkworm, as experience in the past has proved that the worm deteriorates, and with it the silk, if fresh seed is not available.

As the vacant land is getting used up and the forests are being reserved so that grazing is limited, it is becoming more and more important to develop fodder crops. Large-scale trials of Egyptian clover have proved successful.

Forestry preservation was started in India with the creation of a Forest Department in 1867. The object at first was merely to arrest the appalling destruction of the forests which had gone on for some centuries. The result was the erosion and denudation of the soil. The destruction of the forests had led to the lack of fuel and the use of dung cakes as substitutes, with the consequence that the soil is starved of manure. Although the forests cover more than a quarter of a million square miles, only 60,000 have been brought under scientific management. This has involved an interference with grazing rights and has given rise to much trouble. A commercial era has been reached since the war, in which an attempt is being made to create a new market for Indian timber both in India and abroad. India, with her vast forests, still imports wood and wooden articles. A Forestry Research Institute has been set up at Dehra Dun, which is also intended to act as a link between Forest Officers all over India. Thus science and scientific management is being applied to forestry as well as agriculture, and the two interact as in the case of fodder.

Experiments are also being made with the conservation of water in the soil by dry farming, which if successful would enable cultivation to be carried on in the dry season. Progress has been made in the matter of pest control, and the cotton boll weevil has been tackled by the compulsory clearing and burning of the cotton stalks so that there is nothing left for it to feed on. The cultivator has, however, in many

[1] *M.M.P.*, 1913, p. 154.

parts an instinctive or religious feeling against taking life and regards pests as a manifestation of heaven's wrath which it is useless to combat.

We have already seen how important a factor agricultural engineering had become in the matter of well boring. In Madras the function of the agricultural Engineer is to adapt machinery to local conditions and in Burma the idea has been to find a cheap design for cane crushing and economy of fuel in sugar boiling furnaces. In the Central Provinces an improved type of hoe, two types of ploughs, and a new type of pump have been designed. With the small fields, motor tractors seem unlikely to be much used, for ploughing. Cattle diseases are one of the plagues of India, and there has been a recent rise in the price of working cattle which may promote the use of power engines in agriculture for water pumping. There has also been activity on the veterinary side, inoculation against rinderpest being specially successful. Breeding for larger milk yields and stronger draught animals is also being tried, as well as successful crossing of the Indian ewe with the Australian merino ram for wool production. This is interesting as the Australian flocks were originally bred by crosses of the hairy Indian sheep with the merino imported from the Cape and England.

This general review brings out the hopefulness of the new methods but it also shows again the necessity for Government organization at every stage. Co-operative societies do a great deal to spread knowledge and disperse the seed. In other cases local bodies called Agricultural Associations have proved the means of arousing interest, and they carry out demonstrations with the assistance of the agricultural officers. As the cultivator cannot read, printed leaflets are not much use, and the difficulty is to win his confidence. He is willing to try a new method if he is convinced that it will pay, but he is too poor to run any risks. Agricultural education is being developed in provincial agricultural institutions in Bombay, Madras, United Provinces, Bengal, Central Provinces, Bihar, and Orissa, and they are being started in Burma.

It is, however, not difficult to realize the enormous importance of the new development which lies behind the figures just quoted. If successful, the new agriculture means the "making over" of something like one-fifth of the human race, improved yields mean a higher standard

of living, more intelligent cultivation, and a break-up of the changeless East. The cultivator will demand better roads and along the better roads will perhaps be brought the fuel which will enable him to dispense with dung cakes as fuel, and the manure will go into the land and be helped out with chemical manures. India will not merely grow better crops from better seed but will cultivate intensively, and her yields will no longer be the despair of good agriculturists when they look at the results obtained in Java or Japan.

The improvement of agriculture was recognized by the Industrial Commission of 1918 to be a necessary preliminary if an important industrial development were to take place in India. The Indian cultivator can afford so little at present that he is not a good market for Indian industrial products. On the other hand, in the past in France, Germany, and England, an industrial development has always reacted on agriculture in the direction of improved methods. Labour in each country became more difficult to obtain, the industrial worker was paid at a higher rate, the agricultural labourer's wages rose too, the farmer had therefore to adopt improved implements to save labour, and he had to get more out of the land to pay his labour bill or be squeezed out. It is possible that this, too, may happen in India.

The following description of the cultivator by the Aga Khan makes one realize vividly the extraordinary importance of any device that should raise the level of cultivation, and the standard of living.

" A breeze alternately warm and chilly sweeps over the monotonous landscape as it is lightened by a rapid dawn, to be followed quickly by a heavy molten sun appearing on the horizon. The ill-clad villagers, men, women, and children, thin and weak and made old beyond their years by a life of under-feeding and over-work, have been astir before daybreak, and have partaken of a scanty meal, consisting of some kind or other of cold porridge, of course without sugar and milk. With bare and hardened feet, they reach the fields and immediately begin to furrow the soil with their lean cattle of a poor and hybrid breed usually sterile and milkless. A short rest at midday, and a handful of dried corn or beans for food, is followed by a continuance till dusk of the same laborious scratching of the soil. Then the weary way homeward in the chilly

evening, every member of the family shaky with malaria or fatigue. A drink of water, probably contaminated, the munching of a piece of hard black or green chaupate, a little gossip round the tree, and then the day ends with heavy, unrefreshing sleep in dwellings so insanitary that no decent European farmer would house his cattle in them.

"To teach this vast mass of people better methods of agricultural industry, to awaken in them the ambition for learning and improvement, to lead them to differentiate between waste and thrift when the result is not immediate, to secure for them the just fruits of their toil—these, in the aggregate, constitute the great economic problem of India. The annual value of their tillage even under present conditions is estimated at not less than £1,000,000,000."[1]

The Aga Khan goes on to say that with scientific agriculture the yield could be doubled in the next few years and "before the end of this generation it could be trebled, with a corresponding rise in the standard of living throughout the land."

The difficulty in India is that the scattered nature of the plots of land block the path to progress. Every male has the right to a share of the ancestral land, and can demand a division so that he gets his share. In any case the land is subdivided at death. It is not a case of subdividing a holding into three parts among three sons, but of dividing each field into three parts so that the division shall be fair. Thus, 15 acres in three plots may be divided among three sons, not into three plots of 5 acres, but into 9 plots of $1\frac{2}{3}$ acres each, and if these are subdivided again among five sons, each gets a tiny fragment only since the land is now divided into 45 scraps. Thus, the holdings come to be the wrong size and shape for efficient cultivation, i.e. long narrow strips which are difficult to water efficiently and which are almost impossible to protect by embankments against one of the great difficulties of Indian agriculture, the washing away of the soil by monsoon floods. A farm is such a fluctuating unit that there is no incentive to permanent improvement since there is no such thing as a permanent farm. The result is that the bulk of the holdings are uneconomic. They are not large enough to provide a living and, owing to the nature of the strips, impossible to cultivate efficiently.

[1] *India in Transition*, 1918, pp. 203–5.

Land in India is subjected to a continuous series of economic earthquakes owing to subdivisions. "To develop and improve a permanent 10 or 20 acre farm is an intelligible proposition, to develop a 10 or 20 acre farm which must in the near future be split up and fragmented is quite another matter." [1]

Not merely are the farms too scattered, they are too small to employ usefully a pair of bullocks all the year round, and the cultivator either scratches the ground himself, with correspondingly poor yields, or keeps small, unthrifty animals for ploughing. Then there is the further difficulty of protecting each scattered striplet from wild pigs and straying bullocks as there are no fences, or from crows during harvest time.

Another difficulty is that as a worker the ryot is not very efficient or energetic. If he gets a good price for his crop he works less or hires labour; he is necessarily idle for long periods of the year, and therefore he is an intermittent cultivator owing to the fact that he has only a busy period of sowing or reaping time. If he could fill in the intermediary period by some by-employment or by cattle rearing, much moral force would be gained by steady instead of intermittent labour, but there is no accommodation for cattle in the Indian village as at present organized. "The villages are congested and the people live crowded on village sites which give them no facilities for keeping livestock." This is really the justification for the crusade in favour of home spinning as it would help in the slack periods.

"The majority of farms are of the wrong size and the wrong shape, they are not permanent units and are not susceptible of orderly and adequate improvement. The majority of farmers are deficient in skill, industry, and energy, and balance a low standard of endeavour by a low standard of living." [2]

Every European country has had to face this problem of the uneconomic holding and the inefficient cultivation of the peasant. France has cut down the size of the family so that the number of participants in the subdivision on death is small. The Frenchman is always buying more land so that *morcellement* and consolidation go on side

[1] Keatinge, *Agricultural Progress in Western India*, p. 184.
[2] Keatinge, op. cit., pp. 186, 326.

by side. In Germany enclosure into compact farms was arranged by Land Commissions. In Russia, the country most nearly approximating to India in the vastness and nature of its agricultural problems, consolidation of strips was proceeding with great rapidity after the Japanese war of 1905. Austria, Switzerland, Denmark, and Sweden have also been obliged to grapple with the matter, while England abolished the strip system with great benefit to the yields at the beginning of the nineteenth century, and her peasantry either became large farmers, captains of industry, factory hands, or agricultural day labourers. It is possible that co-operation may spread to such an extent that although the strips belong to many persons, the area may be worked by a co-operative group as an economic unit with economical utilization of plough oxen. This is already being done to a small extent in certain parts of India.

The same course of events may or may not happen in India as in Europe. But improvement is slow owing to economic and religious obstacles. What has actually happened is that the area under cultivation has increased, that land values and rentals have risen, and that there has been a rise in the price of agricultural produce especially in the export crops. The interesting thing is to find that the same problem of "enclosure" of scattered strips and the formation of an economic holding is as important in India now as it was in England during the last quarter of the eighteenth century or in Ireland in the 'eighties of the nineteenth century. Enclosure was planned for Russia in 1905, and was taking place rapidly before 1918, and measures were approved in a law of 1922 for its further continuance.

One thing is certain, that India cannot go on as she is now doing simply multiplying without a corresponding increase in agricultural efficiency. The supply of good seed will probably increase production by millions of pounds, but that divided amongst 319,000,000 people is an infinitesimal fraction to each, and good seed badly grown will not make any appreciable difference. On the other hand, the raising of the standard of production and consumption by even a few annas per head will, with such enormous numbers, make an appreciable difference to the demands and resources of the world.

At present Indian peoples seem to want to have it all

ways, they want to keep caste and family system, subdivision of land, intermittent labour, and expect the Government to wave a magic wand and produce prosperity. Such magic wands have to be paid for, and it is doubtful whether India is able or willing to foot the bill necessary to pay for seed, implements, direction, and irrigation. Scientific agriculture, though it pays in the end, is not cheap, and an enormous organization is needed if any real impression is to be made. And that must mean increased taxation.

Yet India is a country of infinite possibilities, and it is easy to exaggerate the poverty of the Indian peasant by thinking in terms of Western standards. In a tropical climate wants are far fewer, fuel, furniture, and clothing count for far less in India, and owing to the impassable barrier placed by caste against social ambition the Indian peasant lives a life somewhat approaching equilibrium. In India tillage is the most honourable calling, and the highest aspiration is to hold land. It is from the peasantry that the Government has derived in the past the bulk of its revenue, and from the peasants it draws the largest single item of revenue to-day; on the peasant the merchant depends for the bulk of his exports, and it is on the peasant that the artisan depends for his employment; it is the demand of the peasant that determines a large portion of the import trade.

In the century and a half comprising our period, India was the greatest peasant Empire in the world.

Industrial Changes

Manufactures in India at the beginning of the nineteenth century were carried on, as they had been for centuries, for three principal markets—the village, the court, and the export trade. Manufactures to supply the village wants were provided by the village servants, who consisted of a carpenter, blacksmith, leather dresser, barber and washerman, and in the larger villages a weaver, potter, jeweller, oil man, and sweetmeat maker. These men manufactured solely for the requirements of the village, and were remunerated in grain. They would also do extra agricultural work in the busy seasons of sowing and harvesting. Spinning was done at home by the women, and the grinding of flour or rice was also a home industry. The garments needed by those dwelling in the warmer regions were scanty and consisted of a little cotton cloth.

Boots or shoes were not worn by the mass of the people, nor were builders required for the primitive houses which were made of mud or reed thatched by the villagers themselves. The upper classes lived to a large extent in tents and the potentates in palaces, but the middle class was small and non-ostentatious for taxation reasons. Brass, copper, or iron vessels were little used owing to their costliness. The oil man with a primitive hand-press crushed the seeds to supply oil for artificial light or food. The Indian village industrial organization was, therefore, very simple, and there was no division of labour, but it comprised by far the largest part of the industrial activity of India. The typical carpenters were described by Sir T. Morison, writing of the United Provinces in 1906, as having "next to no capital invested in their industry; their labour is not specialized, for they do all kinds of carpentry work and eke out their livelihood by following other callings as well. They lead hard lives, and have a diet of the coarser grains only".[1] Of these and other village artisans he says,[2] "They make and repair the ploughs, carts, and other simple implements of Indian husbandry; the potter supplies the domestic utensils, and the barber and washerman perform services for the rural population which Indian social habits have delegated to a particular class of community . . . A carpenter (assisted at his trade by the males of his family) may have work connected with twenty-five to fifty ploughs."

The chamar, i.e. the skinner and leather curer, is also employed as a ploughman for part of the year; he and his family also act as reapers and help to make earthworks. With the growth of the export trade in hides and the rise in their value [3] this class has probably become better off. Mr. Moreland has shown that relatively less leather was used in the time of Akbar than in the past century. Not merely did a smaller population of about a hundred millions require fewer leather buckets for water, but leather was hardly used at all for harness or saddlery. Boots and shoes then as now were the exception.[4]

[1] *Industrial Organization*, p. 182.

[2] Ib., p. 178.

[3] *Industrial Commission*, p. 354. In 1846–7, 48,212 hides were exported from Fort St. George, the average value being Rs. 0-7-5; in 1912–13 the hides exported from India were 13,450,913, the value being Rs. 8,05,86,105 or an average of Rs. 6 each.

[4] "Thus the main markets for leather goods were relatively to the population smaller than they are to-day while exports were quite un-

For the market of the Courts, costlier materials were used, and here the skilled artisan was in request. The jewellers, the embroiderers, the silk weavers and makers of other silk fabrics, the carvers of stone, wood, and ivory, the workers in wrought metal, would all find their market in the luxury demands of the potentates. Here, too, was the demand for steel for weapons, costly though it was, and here too would be the market for copper and brassware. Such permanent building as there was took place in connexion with forts, palaces, and tombs. Silk weaving was a " minor industry " in the time of Akbar,[1] and though the East India Company did a good deal to promote both the production of raw silk and the production of silk piece goods in the eighteenth century by introducing new varieties of silk-worms, it was not very successful owing to the diseases which attacked the worms. The Indian market for silks was supplied by imports from China and Persia. Bengal and Kashmir were the chief centres of Indian silk weaving at the beginning of the century.

Shawls were supplied from Kashmir, and carpet weaving, fostered by Akbar at Agra and Lahore, was still a feature of Indian textile production. The supply of wool was limited, and consisted of the hairy variety, and such cloth as was worn was imported.

Much of the production for the Courts was done in workshops under supervision. Bernier stated that " Large halls are seen in many places called Koshkanas or workshops for the artisans. In one hall embroiderers are busily employed, superintended by a master. In another you see the goldsmiths, in a third painters, in a fourth varnishers in lacquer work, in a fifth joiners, turners, tailors, and shoemakers, in a sixth manufacturers of silk brocade and fine muslin." These workshops offered the possibility of improvements in design and workmanship.[2] Even to-day the most skilled work is found in the cities which were former capitals.

A certain amount of compulsion seems to have been used. The Government weaving establishments were under

important, and the conclusion appears to me to be justified that the industry as a whole was less extensive than at present and that the modern export of the raw material represents, not the destruction of an ancient industry, but the utilization of matter which had been wasted in the earlier period." *India at the Death of Akbar*, p. 163.

[1] Moreland, ib., p. 171.

[2] Quoted Moreland, *Akbar*, p. 186.

the uncontrolled authority of officials. Guards were commonly placed over any weavers who would not work, and they were beaten if they tried to abscond. Those in charge took 25 per cent of their pay.[1]

Raynal, referring to the weavers in the royal factories, said, "These unhappy people are forbidden under a pecuniary or corporal penalty to sell to any persons whatsoever a piece of cloth exceeding the value of 72 livres. The practice of the Government in obliging the best manufacturers to work for its own account although not paying them well and keeping them in a state of captivity makes them afraid of displaying too much skill." [2] It was this market that suffered with the decline of the princely rulers during the first half of the nineteenth century and a corresponding retrogression in artistic production took place.

There was but a restricted market among the small number of people constituting the middle classes as they dared not assume an appearance of wealth.

Bernier, writing to Colbert, said, "No artist can be expected to give his mind to his calling in the midst of a people who are either wretchedly poor or who, if rich, assume an appearance of poverty and who regard not the beauty and excellence but the cheapness of an article: a people whose grandees pay for a work of art considerably under its value and according to their own caprice." [3]

The third market was furnished by the export trade and here cotton-piece goods were all important.

Both the Dutch and the English competed in the seventeenth century for these goods in order to export them to other parts of the East and to Europe. Weavers could thus pick their customers, and the rivalry of the buyers must have raised the price of their wares. In Gujarat, where there was no such rivalry, the English could get cloth made to their own specifications, but the weaver would not trouble to do this in other parts.

The fine muslins of Dacca were famous, as they had been in the era before Christ, and Bengal was one of the great cotton cloth producing regions; the Indus plain, the Coromandel coast, and the country along the Gulf of Cambray were all regions working for the export trade. There were large communities of weavers in the seventeenth

[1] Hamilton, *Trade Relations between England and India*, p. 199.
[2] Quoted Hamilton, ib., p. 199.
[3] Quoted Moreland, *Akbar*, p. 187.

century at Lahore, Multan, and Sukkur.[1] The bulk of the cloth exported seems, however, to have been woven in the neighbourhood of the ports. Unless the goods could come by river, the cost of transport on goods other than the very fine luxury goods was prohibitive of a large trade from inland.

At the beginning of the nineteenth century when one regards both the internal and the export markets, cotton was the most important industry. It also gave rise to a considerable industry of painting and printing the colours on to calicoes and to the preparation of vegetable dyes.

Weaving was so widespread that there were several weaving castes and they were organized, as were the English in the middle ages, in trade guilds.

In the case of the East India Company cloth was bought from the weavers whom they previously financed, and then dyers or bleachers were employed to get it ready for the market. The importance of the export market was, therefore, very great. The Company employed as agents middlemen or mahajans who also organized part of the internal trade in cotton goods.

The whole tendency of the administrative system of the country from the time of Akbar onwards had been to discourage production owing to the enormous exactions of the officials. The agricultural and the industrial population were " at the mercy of an administration conducted by men who were accustomed to extremes of luxury and display, who were discouraged by the conditions of their tenure from taking measures to foster the development of their charge, and who were impelled by the strongest motives to grasp for themselves the largest possible share of each producer's income. Productive enterprise was penalized, while the demands on the existing stream of commodities were certain to increase, the incentive to effort was bound to diminish, and the superior attractions of an unproductive life to become more and more apparent to all the most active elements of the population ".[2] The foreign merchants provided a certain antidote to the dry rot which sterilized the energies of industrial producers under such a system. The activities of the foreigner stimulated production through the increased demand for commodities, the introduction of new staples, and improved processes.

[1] Moreland, p. 182.
[2] Moreland, *Akbar*, p. 299.

The industrial situation at the beginning of the nineteenth century was one of stagnation counteracted by a certain foreign demand. The caste system, however, provided for the continuance of hereditary industrial occupations since change was so difficult. It provided the mechanism for technical training, dexterity, and the traditional manufacture of definite types of goods, and in the sons of the craftsmen there was a continuous succession of hereditary apprentices.

The interest of the ensuing century from the industrial point of view lies in the reconstruction of Indian industry along new lines. A secure Government was provided in which production could function freely, but the paralysing effect of a century and a half of plunder was still a dead weight on industry. The policy of *laissez faire* did not call forth that enterprise which it was hoped would re-create an Indian industry. Two wars, the Crimean War and the American Civil War, stimulated the jute and the cotton industry in factories, as did the European War of 1914 in the case of the iron industry. Relatively superior in its industrial efficiency to the Westerners of the sixteenth and seventeenth centuries, India was relatively inferior by the beginning of the nineteenth. The stagnation of industrial initiative was so great that the new developments of cotton and jute manufacture, engineering, railway building, and coal-mining were started by Englishmen, Scotchmen, or Parsees. In Bengal the Indian himself remained a trader and did not develop manufacturing. Nor did the Indian wealthier classes themselves find the capital for factory or mining enterprises. Nor did those trained in the new enterprises develop sufficient skill and business acumen to take over the foremen's posts and the supervising jobs.

At the beginning of the present century, the new nationalism demanded an industrial development, the utilization of the raw materials of India by her own people, and such a development of manufactures as would ensure national self-sufficiency.

The English Government was not unfavourable, as it wished to provide an alternative employment to agriculture which should furnish an outlet for the labourers and cultivators in famine years.

Appeals were made to Indian capitalists to invest their money in industry, educated Indians were urged to devote

themselves to industrial management. The Indian Industrial Conference was started in 1905 as an offshoot of the National Congress. It met annually and carried on the propaganda in favour of industrialization. A movement called *Swadeshi* arose a little later, the object of which was to boycott foreign goods and encourage home manufacture. All sorts of enterprises were started by Indians for the manufacture of piece goods, soap, matches, pencils, and cutlery, and enthusiastic nationalists found the money. Many of these enterprises were unsuccessful. "Too many of its disciples were apt to suppose that because an article was manufactured abroad and imported into India it could necessarily be made in India at a profit. Unfortunately, also, the promoters of the newly established concerns lacked business ability and practical experience, and overlooked the fact that the imperfect theoretical knowledge of an industry, acquired from the study of books or even in technical institutions, is an insufficient equipment for undertaking manufacture on a commercial scale. Professional men and landowners put money into businesses that commanded no better technical direction and expert knowledge than those of youths half-trained in this way. Even where more experienced men were forthcoming to carry on the actual work, the industry or its location was too often selected by the promoters without a due consideration of the economic factors involved, and concerns were frequently started with inadequate capital." [1]

This movement having resulted in such widespread failure, there was a demand that Government should do the pioneering work and should undertake for industry what it was already successfully doing for agriculture; in other words, the Government was to start industries, supply advice, assist with capital, and institute a wide system of technical and commercial training. A Bureau of Commerce and Industry had already been started by Lord Curzon in 1905, but a far more active policy was demanded—an industrial revolution in the next decade was the idea, in which the Government should bear the loss and the Indians carry on at a profit wherever the Government showed that a profit could be made.

The success of Japan as an industrial nation still further stimulated the demand for the industrialization of India.

[1] *I.C.*, pp. 66–7.

Japanese progress was ascribed to State aid on the part of their Government.

The War of 1914–18 brought home to India the danger of being so largely an agricultural country, iron and steel imports were cut off, cotton machinery, steam engines and boilers were cut off, chemicals were cut off, and the railways suffered in their equipment. It became impossible to get the aluminium on which the Madras industry relied, and there was a dislocation of the markets for raw material produced in India, especially of rice and hides, which had found a large sale in Germany. Shipping, too, was restricted, and the agitation reminds one of the situation in the United States in 1816, when they had been cut off from the British markets by the war of 1812. An industrial commission, sitting from 1916–1918 under the chairmanship of Sir Thomas Holland, explored the whole industrial situation, and the report exhibited a backward state of things. It chronicled a lack of skill, lack of enterprise, lack of capital, lack of business ability and knowledge, and lack of an efficient labour force. It reported in favour of technical education, scientific advice, and government assistance generally.

The articulate classes felt, however, that an industrial development was impossible without a protectionist tariff and so the demand for industrial development and fiscal autonomy became inextricably intermixed.

The parallel with Russian economic history is very close. There was in Russia the same awakening after the defeat in the Turkish War of 1878, the same intense nationalism which led Russia to repudiate the West, the same necessity for Western capital and Western experience if industries were to be started in an agricultural country without a large middle class. Perhaps the Russian development may serve as a warning against a too rapid forcing of the pace. In Russia it was the peasant that paid in the shape of increased taxation for the bounties and the tariffs, with the result that he became the heaviest taxed man in Europe in proportion to his capacity to pay.[1]

In India the nineteenth century witnessed the decline in some of the older branches of hand industry, viz. cotton spinning, carding and weaving, although the decline was not nearly so great as is sometimes represented. The brass

[1] Raffalovich, *Le marché financier*, annual articles on Russia from 1900.

founders were affected by the import of brass sheets, but the maker of brass hollow ware greatly extended his business. Local oil pressing probably suffered as the oil seeds were exported to be crushed on the continent, though the demand for village oil continued. The oilmen simply did not share in the increasing volume of trade. Some compensation was, however, found in the new industries connected with tea, indigo, cotton ginning, and leather tanning. Two new textile centres arose in Calcutta and Bombay, the former for jute and the latter for cotton, the railways started great repairing shops which were the training ground for Indian engineers. Engineering also started in Bombay to put up and repair the cotton machinery and round Calcutta to deal with the machinery employed in the jute mills and on the tea plantations of Assam and East Bengal.

Engineering and textiles partake of the nature of home industries even though people are massed in power-driven factories. In a cotton factory it is a question of adding loom to loom or spindle to spindle. Engineering in repairing shops is essentially an individual affair. The real change comes in any country when the iron and steel industries begin to be successful. These mean mass production on the large scale. Very large amounts of raw material and fuel, chemical and technical knowledge, and great business ability are required to make these huge undertakings a success on the modern scale. The development of the metallurgical industries means the real industrial revolution. England, Germany and the United States of America all started their iron and steel industries on the modern scale before they started their textile factories. These countries became habituated to large scale management and trained a highly skilled race of miners, engineers, and foremen. The textile development in these countries came later, and it rapidly assimilated the new machinery provided by the large scale metallurgical industries. The railways increased the size of the latter and stimulated further developments in iron and steel both in inventions (acid steel, Bessemer, and basic steel, Thomas), and in organization. To this again the textiles responded with capitalistic combinations and world-wide organization. On the other hand, France began with the transformation of the textiles, and remained up to 1914 the country of small undertakings. The lack of good coking coal, the unfavourable situation of the coal fields, and the peasant tradition, which made it

difficult to get labour, all kept back the large scale iron industry in France, although it developed in one or two places, notably at Creusot. It is interesting to see whether Indian industrial evolution will follow that of France or Germany.

On the question as to whether the iron and steel industries of Bengal will be successful, whether there is a sufficiency of good coking coal, whether a skilled race of artisans can be evolved for coal mining and iron works, whether the superintending and business ability is sufficient, whether factories can be made really efficient in a tropical climate—on these questions will turn the industrial revolution in India. Moreover, a successful development of iron works even in Bengal will not transform all India. Iron and steel works, however, set a different standard and create a different type of organization and power. The textiles even when worked by machinery are a transition from the domestic stage of manufacture.

Up to 1900 anything like an industrial revolution in India seemed remote. Apart from the cotton and jute industries and the indigenous industries, there was no one of the other manufacturing industries in which as many as 20,000 persons were employed during the year 1901.[1]

The two important factory industries were jute and cotton, and India began her large scale production with a textile and not an iron development. Jute fibre was exported by the East India Company as early as 1795, and forty years later a pure jute yarn was made and spun in Dundee. The yarn was woven by hand-loom weavers in India itself. In 1855 in consequence of the great demand for jute arising out of the alterations in trade owing to the Crimean War, the first spinning mill was set up at Rishra near Serampore in Bengal by an Englishman named Acland. The first power loom was erected just outside Calcutta in 1859. From 1868 to 1873 the mills coined money and dividends ranged from 15 to 25 per cent. The inevitable rush to build mills not merely increased their numbers but diminished their profits. Since that date the jute mills have pursued a conservative system of finance.

In 1881 no less than 5,000 power looms were at work in Bengal,[2] and in 1916–17 there were 39,404 looms in

[1] *M.M.P.*, 1903, p. 230.

[2] Subsequent figures were :—

1891	8,000	
1901	16,000	
1911	33,000	in 59 mills. *I.C.*, pp. 13–14.

71 mills employing 260,199 persons. The average annual value of the jute trade to Bengal was computed by the Industrial Commission to be forty millions sterling at the pre-war rate of exchange. The majority of the European staffs are of Dundee extraction, most of the managing experts are Scotch, and the capital is largely British. The mills are said to be maintained at a level of efficiency which is relatively high for India. The interesting feature is that whereas the original labourers in the mills were Bengalis, 90 per cent of the labour is now imported from other provinces. Jute mills have, therefore, stimulated a considerable amount of migration. The mill workers were recruited by a special class of men—sardars—who generally provided the housing accommodation for the labourers in collections of huts "among surroundings usually insanitary and unpleasant".[1] The mill workers remain for a few months and drift back to the villages for the busy sowing or reaping period. The jute labourers earn the highest wages for unskilled labour in any part of India except the Punjab. But higher wages do not produce more efficiency, as the labourer merely works fewer days in the week.

Jute requires pressing before it is delivered at the factory, and the number of works for carrying out this process rose from 94 in 1903 with 16,278 people in them to 115 employing 30,207 in 1911.[2]

The mechanical operations for the preparation of this crop are far less extensive and elaborate than in the case of cotton, and artisans and engineers are less in evidence in connexion with the preliminary treatment of the fibre. Nevertheless, in Calcutta engineering industries grew up to repair or set up the machinery for the jute mills or to deal with that in connexion with the tea plantations. The shops employed 12,000 people in 1915.

The interesting thing is that the Bengali merchant who collected the jute did not take up the manufacture. It has been a British development. In Great Britain it was exceptional for the merchant who supplied the raw material to start the factory, but the small weaver or calico printer who rose from the ranks became the manufacturer.

Bengal possessed an invaluable asset to any industrial development in its river system which made transport

[1] *I.C.*, p. 14.

[2] *M.M.P.*, 1913, p. 280.

easy and in the proximity of the coalfields, which furnished it with power in the shape of steam.

Very different, however, was the situation in the other great textile centre, Bombay. We have already seen that a large cotton industry was situated round the Gulf of Cambray depending on raw cotton brought down through the valleys of the Nerbudda and Tapti Rivers. As the mouths of these rivers silted up, Bombay became the centre of the cotton trade. It has behind it the Deccan cotton tract and the advantage of proximity to the export markets in virtue of its sea position. It lacked power and its coal had to be imported from England. At the beginning of the twentieth century it became possible to import coal from Natal. The first cotton spinning mill was started here by a Parsee in 1851. The cotton boom of the American Civil War provided the capital for more mills, as did also the profits of the opium trade with China, and the opening of the Suez Canal reduced the price of coal. By 1889 there were 69 mills and a rapid expansion took place after that date. The yarn was used by hand-loom weavers in India, and was also exported to Japan and China. The rapid development of Japan, which not merely began to supply itself with yarn, but also competed in the China market, retarded the expansion of the yarn industry and led to an increased production of cloth. Hence weaving expanded more rapidly than spinning after 1900. Grey and bleached goods represented 70 per cent of the production of cotton cloth, while piece goods were exported to Africa and Arabia from Bombay. They went chiefly to the Straits Settlements and Ceylon, where the coolie had migrated. The former market in China for Indian piece-goods was seriously damaged by the revolution in that country.

Although cotton was also produced in Madras, Cawnpore, and other places, the Presidency of Bombay produced 87 per cent of the cloth and 75 per cent of the yarn made in factories in India.[1] The general tendency of recent years has been to spin higher counts, i.e. finer yarn, which has necessitated the import of American raw cotton, and thus the Bombay manufacturer has become deeply interested in the question of producing better lint in India itself.

Finer kinds of cloth have also been made, and this has made it necessary to import the finer English yarns.

[1] *Indian Year Book*, 1923, p. 341.

The difficulty of power has been solved since 1915 by the production of electricity through the storage of monsoon water in the West Ghats, whence it is supplied to the city of Bombay at very low rates. Ahmedabad in the same Presidency is the second great cotton town of India, with 60 mills which produce nearly a quarter of the cotton goods made in India.[1] The cotton industry is almost entirely in the hands of Indians, and the capital has been raised in India itself. No greater contrast could therefore be found than between the two great textiles of Bombay and Bengal.

Cotton spinning and weaving required more skill on the part of the operative than jute, and the Bombay mill operative is in consequence more of a skilled artisan. The mill hands live in *chawls*, i.e. buildings several stories high divided into single room tenements. Their congested condition is notorious. The mills depend, like those of Bengal, on immigrant labour recruited by jobbers. The factory workers consist mainly of cultivators who have an uneconomic holding which they have to supplement by industrial work. There is a scarcity of hands generally, and the mill-owner is apt to think "Thank God for a famine".

In connexion with cotton, the semi-industrial occupation of ginning and pressing the lint became important. There were 610 of these works using power in 1903 and employing 44,781 persons, and 1,166 with 89,751 persons in 1911.[2] The ginning industry was first started by Englishmen, but the works were soon absorbed by Indians. There was an excess of gins, with consequent competition, but the social effect has been to raise the price of labour in the agricultural districts where cotton is grown, as work in connexion with ginning and baling was an alternative for the village artisan. It has also provided employment locally for engineers.

The principal coal-fields of India are in Bengal and Bihar, though coal is also found in Assam, the Central Provinces, Hyderabad, the Punjab, Baluchistan, and Bikaner. The bulk of the coal is, however, raised in the Bengal area, i.e. in 1917 16,563,990 tons out of a total output of 18,121,918 tons. The first development of the coalfield was due to the railway demand, and a coalfield was opened at Raniganj

[1] *I.C.*, p. 30.

[2] *M.M.P.*, 1913, p. 280.

in 1854. Europeans have been responsible for working most of the largest and best developed mines.[1]

"The majority of Indian enterprises (on the coalfields) consist of small pits or inclines. Where they possess pumps or winding gear, they are usually worked by small engines with vertical boilers." Considerable technical progress was, however, made by the better class mines, some of which have adopted electricity as a motive power. The coke of this area is suitable for blast furnaces, i.e. for iron production, although there is a large percentage of ash (15 per cent). The supply of labour has been drawn from the surrounding villages and from Chota Nagpur. It is, as usual, intermittent and the output of coal is restricted during sowing or harvest because so many coal miners return to the fields. In the event of a good harvest when they do not want money there is an actual scarcity of labour.

On the Bengal coalfield, iron is also found and with the successful combination of both a beginning has been made with large scale iron works. The Bengal Iron and Steel Company started as early as 1875 and produced pig iron, but it was not a financial success as the ore used was so poor. The discovery of a better grade of ore put the company on a paying basis about 1909. It employed at the time of the Industrial Commission approximately ten thousand men.

The Tata Company was formed in 1907, and began to operate in 1912. It owns iron mines, limestone quarries, magnesite deposits, nine large coal mines, blast furnaces, and coke ovens, with the necessary equipment for the recovery of bye-products. It also makes steel by both the Bessemer and open-hearth processes, and has up-to-date equipment such as tilting furnaces and mixers to receive the molten metals. This enumeration shows how the modern iron and steel industry rests on organization at every stage. This industry received a great impetus from the war.

The new iron town Sakchi, or Jamshedpur as it has been recently renamed, was founded by this Company, and houses are provided for all classes of employees. It has been hacked out of the jungle and now has a population of over 80,000. Whether the provision of good housing accommodation will create a definite class of iron workers is not yet known. Otherwise the general inefficiency of the

[1] *I.C.*, p. 20.

labour employed and the waste of energy consequent on having to train fresh battalions of agricultural workers is likely to militate against the financial success of the undertaking. A big iron industry cannot afford waste at any stage, the operations dovetail too closely.

Moreover, foremen are not created from intermittent labourers, and this means that the superintendents are foreigners who require good salaries.

The iron is there and the coal at present is cheap and accessible. It will, however, soon become a problem of winning coal from deeper pits with more elaborate machinery. Whether this will send up the price of manufacture remains to be seen.

A new port, Vizagapatam, has been created to deal with the new developments of this region. It promises to be the one safe port for larger vessels between Madras and Calcutta on the Coromandel Coast.

An engineering development took place, as we have seen, in connexion with the cotton and jute mills, and the machinery for the tea industry. The most important engineering development, however, arose in connexion with the railways.

The Industrial Commission stated that there were over 70 engineering shops in connexion with the railways and they are to be found in every part of India, the largest being at Jamalpur, Bombay, and Lahore, employing thousands of men. "It is the business of this army to keep in running order the rolling stock and equipment of the Indian railway lines." [1] The labour employed is mainly Indian, but it has been supervised by men brought out from England. "Very few Indians have risen to the rank of foremen," [2] a fact the Commission attributes to the lack of technical training. The shops have, however, been the training ground for engineering artisans of every class and the country practically depends on the railway workshops for its supply of trained engineering artisans. The Government ordnance factories are also important centres as training grounds for engineers.

Another industry, which was new to India in the nineteenth century, was that of leather. A Harness and Saddlery Factory was started by the Government at Cawnpore in 1860, as an experiment, to avoid the expense of importing

[1] *I.C.*, p. 26.

[2] *I.C.*, p. 26.

leather boots and harness from England. A Government Boot and Army Equipment Store was started by private persons with Government aid in 1880. In 1915 there were five large leather factories.

The bulk of the hides is exported and some of them are lightly tanned, and are known as East Indian Kips. The village tanner has been described as turning good hides into bad leather.

The larger tanneries vary in size and efficiency from concerns of 2,000 hands to numerous Indian managed tanneries. "The principal difficulty at present is the lack of organization and of expert skill." [1]

Of two other industries concerned with preparing raw material for the market, namely cotton and jute, we have already dealt.

Tea production has also an important industrial side. Every garden of any importance instituted a factory for drying tea by mechanical processes as it was essential that the leaf should be dried immediately after plucking. The better organized factories are elaborately equipped with specialized plant. The industry, according to the Industrial Commission, employed over 630,000 people, and others on part time.[2]

There is also a growing industry of flour and rice milling and oil pressing. In Burma paddy milling, which consists in taking the husk off the rice, is an important industry, as is also the preparation of teak, and saw mills exist to prepare the planks for export. The mineral oil of Burma has also given rise to a refinery industry working for the export trade. A large proportion of the mineral oil now goes to India, where it is increasingly used for lighting purposes in the home.

The industrial development in Burma is concentrated in Rangoon and has been due largely to European capital and European supervision.[3] The Burman has devoted himself to agriculture and the urban population is not increasing. The industrial and trading operations of Rangoon have been on too large a scale for the Burman, and because he remains an agriculturist there has been an annual migration of coolies from India for the rice milling season.

It is interesting to see how many of these occupations

[1] *I.C.*, p. 35. [2] Ib., p. 25.
[3] *I.C.*, p. 31.

are new. Leather working, cotton ginning, jute spinning and weaving, tea, engineering, coal mining, and railway operating are all new occupations introduced by the English. If, therefore, a certain proportion of hand-loom weavers were adversely affected by the import of cotton piece goods, the industrial compensations have been considerable.

India has been ranked by the League of Nations as one of the eight leading industrial countries of the world. Her industrial development has been hindered in the past by the difficulty of securing efficient labour. Not merely is it seasonal and casual, but the mass of the factory hands has been mentally as well as vocationally inefficient. Indian labour has been described as "expensive in the sense that it does not easily respond to any stimulus, whether of competition, of high wages and good conditions, or professional pride or delight in efficiency and finish. It consists in fact of human material of an almost uniform grade, tractable within limits and for definite purposes, but not rich in unexpected possibilities, and almost entirely devoid of enterprise and initiative".[1] This is probably due to the hook-worm and the debilitating effects of malaria, and it would thus seem as if the industrial and sanitary development of India are interdependent.

The Indian factory hand does not turn up regularly every day and slacks for long periods during the working day. That so little native talent is to be found in industrial management is due largely to the caste dislike of manual labour other than agriculture and the preference of the higher castes to devote themselves to the professions rather than to business or engineering. The profits to be made out of commerce and money-lending in the past were so large that there was no incentive to the Indian to embark on manufacturing business that offered uncertain profits and required special technical knowledge.

Another limiting factor was the difficulty of obtaining any adequate supply of capital in the absence of a developed banking system, and no banking system arose outside the larger towns because money-lending was so profitable and the recognized form of investment was land. Foreign capital was supplied by joint stock companies, and the affairs of the companies were managed by agency firms who would

1 "Economic and Financial Condition of India," *Round Table*, Dec., 1923, p. 100.

undertake the supervision and furnishing of capital to several types of industrial undertakings.

Then again, coal of good quality was lacking except in Bengal, the coal of the other fields being unsuitable for coking and of low calorific value. This coal had to be carried long distances by rail, and as it was of low heating value a good deal of coal was needed to create power, and that made steam power expensive, and militated against a factory development.

With the approaching exhaustion of the Burma oil-fields and the absence of any other Indian source of supply at present, the prospects for petrol-driven engines are not great, unless there is a dependence on import. Electricity generated from the rivers or especially from the head water of irrigation works opens out considerable prospect of cheap power. The Cauvery River is already harnessed, and it is proposed to harness the irrigation works to supply Cawnpore with electrical power.

The difficulty about a hydro electric supply in India is the seasonal nature of the rainfall, which necessitates large water storage works if there is to be a constant supply of electricity from water power and this will add considerably to the capital cost. It has been surmounted, however, as regards the Western Ghats.

The war brought out the great poverty of India in the matter of industrial equipment which should render her self-sufficing. She then began to realize how much she depended on the West for some of the necessities of existence. Textile machinery and parts, boilers, chemicals, drugs, paper, matches, explosives, disinfectants, dyes, tools, chains, wire ropes for the mines, oil and gas engines, cranes, bicycles, motor cars, and simple agricultural machines were not made in India. If India was to be the great self-sufficing Empire of which some of her educated nationals dreamed, these things must be created, and at once. Such was the nationalist demand. Industrial development roused almost as much enthusiasm as the demand for a constitution.

On the other hand, the industrialism created a reaction. It was clear that the effect of a growing industry would be to emancipate the depressed classes. No greater enemy to Brahminism existed than democracy, which challenged the authority of the Twice Born, and industrialism, which cut at the roots of caste, since caste cannot possibly be preserved inviolate in a cotton mill or blast furnace. Hence

part of the movement led by Ghandi, known as non-co-operation or Swaraj, consisted in a movement to re-establish hand-spinning in the villages, and the disciples of the movement were supposed to wear only hand-woven cloth.

Another of the drawbacks to the industrial development of India lies in the difficulty of selling the products within the country. The shopkeeper is almost absent outside the big towns, commercial travellers do not penetrate into the villages, the merchants wait for their customers to come to them, they do not seek them out. Mass production needs a large market, and at present the system of distribution, like the system of banking, is undeveloped. Hence there arose an insistent demand that the stores required both for the Government and the railways should be bought in India itself. Thus one large market would be provided.

The system of home industries still occupies a large sphere in India. The weaving of cotton cloth is still an important handicraft. In the Census of 1901, 24 persons out of every thousand were returned as cotton workers, apart from those employed in mills.[1] Even in Bombay, where the competition of mill-made goods was greatest, the hand-loom weavers were holding their own. The hand-weavers' stronghold is the local and limited demand for a definite type of cloth for which it is not worth while to instal machinery. Frequently weaving is carried on in the weaver's spare time in combination with other occupations, but here and there centres of professional hand-loom weaving exist where the village weaver holds an honoured position and turns out a fair proportion of the dresses worn by the more conservative and orthodox members of the community.

For Madras, Mr. Chatterton considered that the number of weavers had been stationary during the last forty years, and it is stated in the Appendix to the Industrial Commission, where the figures are carefully examined, that "There has been some apparent tendency for the total number of weavers to decrease, but there is reason to believe that this reduction, so far as it is real, is confined mainly, if not wholly, to coarse weavers, who are often not whole time weavers, whose products are less specialized and more exposed to mill competition, and who find it more easy to take to unskilled labour".[2] Up to the outbreak of war there is definite evidence to show that the hand weavers of India were not only using

[1] *M.M.P.*, 1913, p. 274.

[2] *I.C.*, pp. 394–5.

more yarn but that, so far as imports were concerned, there was a very marked increase in the consumption of fine counts absorbed by this class. It is believed that two or three million hand-looms are still at work in India, and that their gross earnings amount to fifty crores of rupees.[1]

It is impossible to estimate to what extent the English cotton-piece goods displaced the hand-woven product. In England itself for forty years after the first power loom was started the hand-loom held its own in the cotton industry, and the enormous production of the mills simply satisfied the growing demand for cotton goods by people at home and abroad who had not worn them before. It is a matter of common observation in India that more clothing is worn, and the mills probably supplied the growing market, leaving still a considerable demand for the hand-loom weaver's product. During the century, however, hand-spinning entirely died out. Attempts have been made to assist the hand-loom weaver in the various provinces by sending round bands of travelling instructors with improved looms such as the fly shuttle. These peripatetic teachers held demonstrations to prove the superior efficiency of the looms they showed. The weavers have been taking up the improved looms to a considerable extent, especially in Bengal and Madras.

The really miserable condition of the weaver is evidenced by the appearance of such large numbers of them on famine relief works, but this is apparently not due to the competition of factory goods. The weaver is dependent on the merchant, who supplies the yarn, finances him and cuts the prices very close. Here again, one is irresistibly reminded of the frame-work knitters in England in the decade 1830–40. So dependent were the weavers on the merchant in India that in Bombay, when a survey of the hand-loom industry was taken, the first step towards betterment was not to introduce an improved loom, but to organize co-operative credit societies.

The establishment of workshops in which hand-loom weavers are employed is reported from Madras and the United Provinces.[2] There is a general tendency to organize handworkers on a small scale, again reminding one of the same transition stage from home-work to the factory which took place in England.[3]

[1] *I.C.*, p. 163.
[2] *I.C.*, p. 164.
[3] Knowles, *Industrial and Commercial Revolutions*, 3rd ed., p. 47 ff.

After hand-loom weaving metal working was the most important cottage industry. As the drinking vessels used in India were made of brass, used by Hindus, or copper, used by Mohammedans, not glass or china, the industry had a large field. According to the Industrial Commission, the brass and copper workers have undoubtedly felt the competition of imported enamelled iron ware, glass, and crockery, but the greater purchasing powers of the people have enabled them to absorb these domestic novelties, and to substitute brass and copper vessels for village pottery.[1] Here, too, the imports seem to have created and filled a demand of their own, and have not caused any striking displacement.

The most important instance of this displacement after hand spinning has been in the case of dyes. The synthetic product has taken the place of the vegetable dyes. They shortened the process of dyeing, gave more certain results, and reduced the costs. The general trend of taste is in favour of the brighter dyes provided by the modern chemical industry.[2]

Other changes are taking place. In the towns the work of paddy pounding and wheat grinding is being more and more performed by power-driven mills. As these, like spinning, were women's occupations, it is the woman and the family wage that are being most seriously affected as in England in the early nineteenth century.[3]

The Industrial Commission emphasized the importance of the cottage industries. They were said to be "a very important feature in the industrial life of India and . . . there is no real ground for belief that they are generally in a decadent condition". Nevertheless, the hand worker has been influenced by the industrial changes. "The weaver has taken to mill yarn, the dyer to synthetic dyes, the brass and copper smith to sheet metal, the blacksmith to iron rolled in convenient sections, in each case with advantage to himself from the lessened cost of production, which has greatly extended his market . . . The tailors invariably employ sewing machines, and town artisans readily take to improved tools of European or American manufacture."[4] Among hand-workers, too, the lack of education and division of labour was emphasized.

[1] *I.C.*, p. 163.
[2] *I.C.*, p. 162.
[3] Knowles, op. cit., pp. 87, 96–7.
[4] *I.C.*, p. 100.

The present dependence on the dealer is said to be bad for artistic skill and craftsmanship.[1] The dealer " does not require articles which appeal to cultured taste but merely such as will find a ready sale ". The Commission summed up by saying [2] that " India is a country rich in raw materials and in industrial possibilities, but poor in manufacturing accomplishment. The deficiencies in her industrial system are such as to render her liable to foreign penetration in time of peace, and to serious dangers in time of war. Her labour is inefficient, but for this reason capable of vast improvement. She relies almost entirely on foreign sources for foremen and supervisors, and her *intelligentsia* have yet to develop a right tradition of industrialism. Her stores of money lie inert and idle. The necessity of securing the economic safety of the country and the inability of the people to secure it without the co-operation and stimulation of Government impose, therefore, on Government a policy of energetic intervention in industrial affairs, and to discharge the multifarious activities which this policy demands Government must be provided with a suitable industrial equipment in the form of imperial and provincial departments of Industries ".

The Government of Madras had in 1908 appointed a Director of Industries to control pioneer industrial enterprises and give information generally of an industrial nature, but Lord Morley prohibited this in 1910, as he did not approve of the State engaging in anything which had " the semblance of a commercial venture ". This put an end to similar activity in the United Provinces.

Unfortunately for the proposals of the Commission, a severe slump followed the after-war boom, the expenditure exceeded the revenue, and the utmost economy was necessary. It was not a favourable time for Government to spend money in experiments of doubtful value when the aggregate deficits in five years amounted to sixty-six millions sterling —" a gigantic sum for so poor a country." [3]

Moreover, the political situation and the non-co-operation movement created such an atmosphere that it was not likely that capital for investment would be forthcoming either within India or without. It is the safety under British rule that creates the value of the investment, and demands for the expulsion of the English were likely to retard new industrial development.

[1] Ib., p. 165. [2] p. 4.
[3] Innes, *Imperial Economic Conference*, 1923, *Cmd.* 2009, p. 53.

In 1921 a Central department of Industries was created which seemed to deal with every possible subject from Meteorology, Irrigation, Geology, Explosives, Posts and Telegraphs, Industrial Training and Intelligence, to Minerals and Factory Acts.[1] With the introduction of the Montagu Chelmsford reforms, the encouragement of industries became a provincial transferred subject.

The most important development has been in the matter of the purchase of Government stores in India.[2] No machinery existed in India for bringing Government buyers into touch with local manufacturers, and the difficulty was to get a definite standard of quality from Indian manufacturers. Meanwhile an Indian Stores Department was created in 1922, and a Test House was reorganized to sample the material offered. Conferences between the central and provincial departments of industries were held to determine general questions of industrial policy. Most of the provincial governments are interesting themselves in some form or other of industrial experimentation; Madras is busy with soap and jam factories, Bombay with pottery for tiles and teapots, in Bihar technical training seems to hold the field. In the Central Provinces the development of electrical power forms part of the Government programme of assistance to industrial enterprise. It is trying to improve the marketing of cottage industries, which is also the line taken in the Punjab.[3]

The great difficulty in India is the lack of fuel for power. In 1918, in consequence of the recommendation by the Commission, a hydrographic survey of India was begun, to see to what extent water resources existed which could be used for electrical power. In 1919 an extension of the Tata works in the Ghats was begun.

On looking back over the years from 1899 one can notice the considerable industrial advance that has been made. The amount of coal raised is always a test, and that had risen from 6,635,727 tons in 1901 to 15,738,155 in 1914, and 17,091,867 in 1920. Electrical works had been started in this period to supply the town of Bombay, in Madras the Cauvery River was harnessed, and in Kashmir the

[1] *M.M.P.*, 1923, p. 136.

[2] Government stores bought abroad :—

	£
1907–8 . .	4,429,000
1913–14 . .	5,373,000
1919–20 . .	13,730,000

[3] *M.M.P.*, 1923, pp. 143–8.

Jhelum. The textiles of jute and cotton had shown a rapid expansion. The number of looms and spindles in the cotton industry increased as follows:—

British India.	*No. of Mills.*	*Aver. No. employed daily.*	*Looms.*	*Spindles.*
1901–2	179	161,756	38,891	4,743,391
1911–12	234	221,076	81,899	6,040,760
1920–1 [1]	249	298,190	109,422	6,243,948

In the jute mills there was the same expansion.

	Persons employed.	*Looms.*	*Spindles.*
1901–2	114,795	16,119	331,382
1911–12	201,324	32,927	677,519
1920–1	282,728	41,588	869,879 [1]

A number of minor industries such as paper, flour mills, and cement works had also come into existence.

Legislation to protect workers in factories had already begun in 1881 and was amended in 1891. The laws applied only to women and children, whose working hours were limited to eleven and seven respectively. Scandals arose in connexion with the Bombay Cotton Mills during the boom of 1904–5 when operatives were worked regularly for 15 hours a day or longer. A committee was appointed in 1906, and a Commission in 1908.[2] Great abuses were disclosed, particularly in connexion with the employment of children, but the long hours were confined to the textile factories. Inspection was inadequate owing to the small number of inspectors and there was a widespread evasion. To remedy these abuses another Act was passed in 1911, one new feature of which was the limitation of hours worked by adult males to twelve. It included seasonal factories working for less than four months, shortened the hours of children, and restricted night work by women.

When India became part of the League of Nations, she was obliged to pass fresh legislation to come into line with the decisions arrived at in Washington in 1919, and another Act was passed in 1922. A Workmen's Compensation Act was also adopted in 1922.

It seems to be admitted, that the impetus to further progress must come from the Government, but the future of industry will depend to some extent on the attitude of Hinduism towards the new developments.

[1] *Decennial Stat. Abs. for British India*, 1924, *Cmd.* 2033.
[2] Report, *Cd.* 4292.

Hinduism was threatened by the Mohammedan invasions and the castes crystallized in opposition. It is now threatened again by the growing industrialism and the constitutional reforms which mean a break-up of the old order and the questioning of the divine authority of the priest. The incalculable factor in India is religion, and the possible duel between the factory system and the Brahmin is of great economic interest.

Commercial Policy

Meanwhile, protection was demanded to assist the growth of infant industries, and a Fiscal Commission was appointed in 1921 to inquire into the tariff. India became, as we have seen, free trade in 1882. In 1894 for revenue purposes, a tax of 5 per cent *ad valorem* was imposed on goods brought by sea. Machinery, railway materials, coal, raw cotton, raw wool, twist and yarn, printing materials and books were put on the free list. Cotton goods in 1896 were reduced to $3\frac{1}{2}$ per cent *ad valorem*, and were offset by an excise duty which did not apply to the hand-looms. The only export duty retained was that on rice. Countervailing duties were imposed on sugar in 1899 and 1902.

In 1909, in consequence of the agreed diminution of the export of opium to China, the revenue suffered, as the Government, having a monopoly of opium, also lost the profit. The export ceased altogether in 1913. This necessitated a further increase in other directions to make up the deficit, and additional duties were placed in 1910 and 1911 on liquor, tobacco, and petroleum.

The real interest centred, however, round the cotton duties. In 1916 fresh revenue was needed, and the general tariff rate was raised to $7\frac{1}{2}$ per cent, cotton being omitted. In 1917 the cotton duties, too, were raised to $7\frac{1}{2}$, but the excise was left untouched, thus making a difference of 4 per cent between the imports and the home product. As Indian articulate opinion had been demanding this for a long time, the concession virtually amounted to the freedom of the Indian Government to control its own tariff, in other words tariff autonomy was in essence conceded as an acknowledgment of India's patriotic attitude during the war.

In 1921 the tariff on cotton piece-goods mounted up to 10 per cent and then 11 per cent, without any alteration of the excise of $3\frac{1}{2}$ per cent. In 1922 a duty of 5 per cent was imposed on cotton yarn. Cotton is now well protected.

In 1921 the Secretary of State, in a dispatch to the Indian Government, formally accepted the principle of non-interference by the Home Government in fiscal matters.

The Fiscal Commission reporting in 1922 advocated protection, and seemed to be dimly aware of the fact that the agricultural worker might have to pay more for clothing and other necessaries of life. The members therefore recommended discrimination in the industries selected and in the degree of protection given, so as to make the burden on the agricultural community as light as possible. The industries that were considered suitable for protection were those for which India had the raw materials, but which needed temporary aid in the initial stages owing to competition from established industries abroad. Imperial preference was declared to be of little economic value to India. The Commission also reported against export duties. It recommended the setting up of a Tariff Board which should investigate the position of each of the industries selected and report to the Government. The Board has already reported in favour of protection to the iron and steel trades, and a Bill has been passed in 1924 to give effect to this, with the proviso that if the duties recommended are not sufficient to exclude this type of foreign goods they shall be increased. India is a late starter, and her people now consider that she cannot reach the goal of a great industrial nation with the handicap of free imports. Japan, the United States, and Canada have become industrialized behind their tariff walls, and India aspires to rank with them.

In 1922 a Committee was set up to consider the nautical training of Indians, and the establishment of an Indian Mercantile Marine.

When one looks back at the general trend of Indian commerce in the twentieth century, the same features are marked as in the preceding period, in that the exports consisted almost wholly of raw material, and the imports of manufactured articles. Even the exports of yarn to Japan were superseded, as Japan took to spinning her own yarn and bought raw cotton instead. The imports came mainly from England, and the exports went to foreign countries. There was a great increase in the volume of trade.

Volume of trade Aver. ann.	*Imports.*	*Exports.*
	£	£
1900–1—1904–5	55,745,000	87,336,000
1911–12	92,383,000	147,878,000

The imports divided themselves roughly into three blocks ; cotton manufactures ; iron, steel, machinery, railway plant, and hardware ; and "other articles", of which the most important was sugar.

Cotton manufactures came mainly from England, although Japan was doing a small but growing share of the trade, which increased during the war. The bulk of the machinery and hardware came from the United Kingdom, but here again during the war the United States stepped in, and has since maintained her position.

Among other articles, sugar came principally from Java and Mauritius, and mineral oil began to come in increasing amounts from the United States. The feature of the import trade before the war was the growing importance of German goods, and Germany ranked next after England in supplying Indian imports.[1] Since the war, the United Kingdom has greatly improved her position at the expense of the United States and Japan, while Germany in 1921–2 was recovering her position, taking 3 per cent of the import trade. Mr., afterwards Sir Charles, Innes, in his speech to the Imperial Economic Conference, said that the British manufacturer had "practically recovered his pre-war predominance in this part of India's markets." [2]

Of the export trade, food grains were the most important single item, constituting 21 per cent of the average of the years 1909–14. The textiles formed another large group, raw and manufactured jute being 19 per cent, and cotton, raw and manufactured, being 15 per cent. Seeds were 11 per cent, tea 6 per cent, hides and skins 7 per cent, and other articles 21 per cent. of the total.

Only one quarter of the total value of the imports was taken by the United Kingdom in those years.[3]

[1] Taking the average of the years 1909–14, 63 per cent of the value of the imports came from the United Kingdom, 7 per cent from other parts of the British Empire, 3 per cent from the United States, 2 per cent from Japan, 6 per cent from Java, 6 per cent from Germany, 13 per cent from other countries. During the war England lost ground and the United States and Japan filled the gap, the share of the United States being 11 per cent instead of 3 per cent and Japan 8 per cent instead of 2 per cent of the whole. German goods, of course, dropped out.

[2] *Conference Report*, p. 54. When the total volume of Indian trade 1920–3 was reduced to the values of 1913–14 it was found that Indian trade had retrograded. The real loss in 1921–2 compared with 1913–14 was no less than 28 per cent. *Rep. Econ. Conf.*, p. 52.

[3] Other parts of the Empire took 17 per cent, the United States 7 per cent, France 7 per cent, Germany 10 per cent, and other countries 27 per cent. Here again during the War the share of the United States and Japan rose to 15 per cent and 14 per cent respectively. France also rose to 14 per cent and Germany disappeared.

Since the war the share of the exports of India taken by the United Kingdom has been 20 per cent.[1] Germany had taken a very large proportion of hides—in 1913–14, 35 per cent, and on the declaration of war, this trace was dislocated. In 1918 an export duty was put on hides of 15 per cent and 10 per cent was taken off if the hides were used within the Empire. Germany, however, seemed to be the only country in the world which could work up light hides, and in spite of the preference, Germany in 1922 was practically buying the lot.

During the war the second place in Indian trade, which had been taken previously by Germany, was filled by the United States of America, but in the after-war trade that place was taken by Japan.[2] The expansion of the trade between South Africa and India is a noticeable feature of recent commerce.

At the Imperial Economic Conference, Mr. Innes stated that " India is by far Britain's best customer. She takes a greater proportion of her imports from the United Kingdom than any other Dominion. Her imports from Great Britain in the last three years have averaged annually 129 millions sterling. That is, she has bought in this period from the United Kingdom as much as the great Dominions of Canada, Australia, and the Union of South Africa combined ".[3]

Banking

One of the most striking features of Indian economic development in the past century and a half was the way in which banking lagged behind the development of trade and industry. The Government of India was, in fact, the chief banker of the country, and since 1867 it held the greater

[1] Other parts of the Empire increased to 21 per cent between 1921–2, the United States had declined to 10 per cent, Japan had risen to 16 per cent, France had dropped to 4 per cent, Germany had increased from nothing to 7 per cent, and other foreign countries took 22 per cent. Thus 60 per cent of the exports of India went outside the Empire. Russia, one of the great tea consumers of the world, disappeared as an importer of Indian tea. Raw cotton accounts for a large part of Indian exports to Japan, viz. 84 per cent. German traders took jute, hides and skins, seeds and rice, and supplied dyes, iron, steel, hardware, machinery, and glass.

[2] The United States imported from India jute, hides and skins, and shellac, the latter for gramophone records. England took principally tea, jute, seeds, food grains, raw and tanned hides, and raw wool.

[3] *Conference Report*, p. 54.

part of its own cash balances, and controlled the currency and the exchanges by its Council Bills.

Up to 1809 the mercantile houses acted as private bankers for the Europeans, and the Indian *shroff* conducted the trading finance. He is still a prominent figure in this connexion. He has acted since the development of banks as a middle-man, inquiring into the circumstances of the would-be borrower, and, if satisfied, he either obtains the money from his acquaintance or gets an advance from the bank, and passes the money on to the borrower at a higher rate of interest. In the country the Sowkar or Mahajan lent money, bought the produce, and sold goods.

In 1809 the Bank of Bengal was founded with a Charter from the East India Company, the Bank of Bombay in 1840, and the Bank of Madras in 1843. These were known as Presidency Banks.

The Government was a shareholder to the extent of about one-tenth of their capital and they issued notes against Government securities lodged with the Accountant General.

In 1862 the privilege of note issue was withdrawn, and since 1867 has rested solely with the Government, and is managed through its Currency Office. After that date the Government ceased to be a shareholder in the Presidency Banks, but agreed to keep a minimum cash balance with each. The chief restrictions on these banks was that they might not deal in foreign exchanges or otherwise employ their capital outside India. They acted as bankers for the Government, paying and receiving money on its behalf. They also managed the debt and received a commission for their services. The Government had the right to nominate three directors on the Board of the Banks. These banks set up branches in other towns.[1]

In 1844 another type of bank was founded, the Exchange Bank, the function of which was to manage the remittance of money to and from India. The greater part of their capital was employed out of India, and their head offices were situated in London. Their number increased to five with 32 branches in 1910,[2] and by 1913 there were 12 Exchange Banks and 17 in 1921.[3] Only six joint stock banks

[1] 1870, 46 branches.
1890, 38 ,,
1910, 52 ,,

[2] They were the Delhi and London Bank, 1844; the Chartered Bank of India, Australia, and China, 1853; the National Bank of India, 1863; the Hong Kong and Shanghai Banking Corporation, 1866; the Mercantile Bank of India, 1893.

[3] *M.M.P.*, 1923, p. 118.

with a capital and reserve of more than Rs. 5 lakhs existed for ordinary banking before the twentieth century. This century, however, saw their rapid increase, and the number reached 18 by 1913 [1] and 27 by 1921. Their capital and reserves increased from $2\frac{2}{3}$ millions sterling to $8\frac{1}{4}$ millions, which is a small total capital when compared with English joint stock banks. Twelve smaller banks with a capital of less than 5 lakhs also began to operate in the present century,[2] only two of which had any considerable number of branches. Even though they were increasing in numbers, the influence of the joint stock banks on the trade of India was imperceptible, so vast was the ground to be covered. The number of banks existing in India is quite inadequate to the real needs of the country. The banks only have branches in 25 per cent of the towns with a population of 10,000 and over. Even in 20 per cent of the towns with a population of over 50,000 persons there are still no banks at all.[3]

In the country districts banking facilities were non-existent. The branch banks in the mofussil towns did not trust the small agriculturist, nor did the small agriculturist have faith enough in a bank to deposit his money there. The transfer of money was, and still is, a personal matter.

"In those parts of India where excessive subdivision of land is not the rule well-to-do agriculturists are found owning a fair quantity of jewellery which is worn by their women folk, and they keep in addition a certain amount of rupees or sovereigns, a part of which is used for the current expenses of their household and of their cultivation. After harvest the money which they have lent or expended on their cultivation comes back to them. This seasonal employment of money leads to two results: the locking up of money unproductively during the slack season, and a high rate of interest during the busy period, because money can only be used for a few months and during those months it must earn a high rate of interest in order to yield the average return which would normally be available from long-period investments." [4]

Practically every native of India is a moneylender at a high rate of interest to needy neighbours whenever he has more cash than he requires for his immediate wants,[5] and he has no use for a bank in which to lock up money which he can employ in usury.

[1] Murray, "Banking in India," *J.R. Soc. Arts*, 1911, p. 272.
[2] Murray, op. cit.
[3] *M.M.P.*, 1923, p. 119.
[4] *I.C.*, pp. 177-8.
[5] See p. 416, note 2.

The local merchant lends in coin and receives back coin. Cheques are not used because they cannot be cashed, and the merchant still carries his chests of silver about with him by cart, steamer, or train, in order to make his payments —a great temptation to thieves.

The circulation of coin was under these circumstances slow, and India steadily absorbed bullion and yet used it very little. Even in the Presidency towns there was at times an absolute scarcity of money. In 1901 it was said, "Hardly is there an industrial concern in India which is not frequently hampered by want of working capital. Hardly ever does a busy export season occur without finding the Presidency towns bare of loanable funds. The coasting and internal trade is chronically brought to a standstill from want of discounting facilities, and even municipal, port, trust, and Government loan securities are occasionally unmarketable." [1]

The latest development in banking has been the amalgamation in 1921 of the three Presidency banks as the Imperial Bank of India. All the general banking business of the Government is conducted by the Bank which is to hold the Treasury Balances, and the bank undertook to open a hundred new branches, the location of one in four being at the discretion of the Government. Most of the restrictions on the Presidency Banks have been removed for the Imperial Bank, and it has opened a London office.

It is hoped that the co-operative societies may develop an investment habit and gradually draw out the hoards.

In looking back at what has been accomplished since 1763, there are certain definite economic gains. New crops have been introduced, such as tea, tobacco, ground-nuts, oats, and maize, while jute and cotton have been extended. There has been an extension of the area cultivated both by planters and by colonists in irrigated tracts. Improved communications and irrigation have led to considerable migrations of the people. The population has increased threefold, and that has led to the cultivation of poorer soils and a diminution in the size of the holdings. Scientific agriculture can, however, help to increase the yields. The incidence of the land revenue payments has been lessened and the cultivator has the greater part of his produce now left for his own use. He has been protected from oppression

[1] Murray, "Banking in India," *J.R. Soc. Arts*, p. 267, quoting from *Capital*, 1900 or 1901.

by the landlord, and to a certain extent from the usurer, and a mechanism is now created in co-operative societies by which he is being trained to help himself. New occupations have been introduced, and the modern industrial code for the protection of the worker has been started. The frontiers have been kept inviolate, and a man may reap where he has sown, even on the Border. That the standard of the poorer classes has risen is clear from the greater amount of clothes worn. The large quantities of bullion absorbed, the increase in the volume of travelling, and the growth in the amounts of articles of luxury and convenience imported all point in the direction of greater wealth of the community, as does also the expanding consumption of tea, sugar, tobacco, and liquor. Cheap postal facilities have further added to the amenities of existence. The number of people on famine relief works are much fewer, and the people generally have developed a greater resisting power. The universal complaints of the villagers and other employers of labour leave little doubt as to the rise of wages. Prices have risen too, and it is not clear how much of this is a rise in real wages.[1] There is no doubt as to the growing independence of the depressed classes who have undoubtedly bettered their condition. Trade has increased enormously, and that means that the cultivator has gained a wider market. India has become one of the great economic factors of the world.

More might have been done perhaps had England not believed so thoroughly in *laissez faire* for herself and for others, but a policy of Government development is expensive, and it would have meant increased taxation to be paid by the peasant, and it is doubtful whether a more energetic constructive policy would have been worth the financial pressure. It now rests with Indians themselves to show how fine an edifice they can rear on the foundations of peace, order, tolerance, justice, security, sound financial administration, irrigation, and communications, which the English have developed in India in the last hundred and fifty years.

[1] This has been investigated for Bombay in the Report on an Inquiry into Agricultural Wages in the Bombay Presidency by G. F. Shirras. It would seem, from the tables given on p. 25, that real wages have risen, but not to a very great extent. "The labourer knows his worth, as he is scarce, and so gets a good wage. He works just as few days in the week as will supply his wants, and knocks off. The scarcer the labour, the higher the wage; the higher the wage, the less days of work." Ib. 25.

BOOK TWO

SYNOPSIS OF PART III

The Smaller Continental Areas

I. *Malaya.*

The desire of the East India Company to have a sheltered port on the way to China led to the acquisition of the islands of Penang, 1786; Singapore, 1819; Malacca, 1795–1824.

The growth of Singapore as a free port.

Crown Colony established 1867.

Internal anarchy and piracy threatened English trade and the English settlements.

The penetration policy, 1874.

1874–1900. The Tin and Railway Era. Public works. The Residents. Law and Order. Rapid economic development. Federation of the four States of Negri Sembilan, Selangor, Perak, and Pahang; 1895, Common economic policy.

The Rubber and Planting Era, 1900. Agricultural progress. New penetration. The adhesion of five other States as Protected States—Johore, Kedah, Kelantan, Perlis, Trengganu.

II. *Nigeria.*

The new Chartered Companies of the 'eighties.

Lagos acquired to stop the slave trade, 1861.

The oil palm formed the staple basis of trade.

Rivalry of French and English firms trading in Southern Nigeria extinguished by Sir George Taubman Goldie, who combined the English companies and bought out the French.

The Oil Rivers Territory allotted to Great Britain in consequence, at the Congress of Berlin, 1884.

Chartered Company formed 1886 to carry on the trade and government.

Expansion into Northern Nigeria, 1896. The French anticipated by Sir F. Lugard.

The Company ceded its administrative functions to the British Government, 1900, continuing as a trading company.

The suppression of slavery, the organization of revenue, the introduction of coin. Railways.

The importance of the knowledge of anti-malarial methods—a new hope.

Amalgamation of Northern and Southern Nigeria, 1914.

The tin mines at Bauchi, the Udi coal-field, and the finding of a deep water port, Port Harcourt.

III. *British East Africa* (*Kenya*) *and Uganda.*

Kenya.

The destruction of slavery and the creation of a new basis for trade.

White settlement possible in the Highlands. Clash of races in consequence.

The Sultan of Zanzibar offered to lease the territory to Sir William Mackinnon.

1888, the Imperial British East Africa Company formed (Ibea) to anticipate German expansion, stop the slave trade, and protect missionaries.

Exploration inland. Germany renounced all claim to Uganda in return for Heligoland, 1890.

The Company unable to face the financial strain of developing the interior—a railway necessary. Uganda taken over by the Foreign Office, 1893.

Company bought out, 1894.

Uganda Railway begun 1895—reached Lake, 1903. German shipping lines. Grant-in-aid unnecessary, 1913.

The settlement of white men, the immigration of Indians.

The natives and their development.

The abolition of slavery. The difficulties of the labour supply.

Uganda.

The development of cotton growing and road building.

PART III

THE SMALLER CONTINENTAL AREAS[1]

I. British Malaya

The East India Company was not only responsible for the spread of British trade and rule in India, it acquired stepping stones to the Far East, and those stepping stones developed into one of the most prosperous of British tropical colonies, the states composing the Malay Peninsula.

It has already been pointed out that a large part of the trade of the Company had been carried on with China from the seventeenth century onwards, and that the Company endeavoured to acquire collecting stations for spices in the islands of the Malay Archipelago. From these islands the Company was ousted by the Dutch, and it only retained Bencoolen, which was a pepper-collecting station. This port was, however, exposed to the South-West monsoon, and afforded no adequate protection for English ships.

The real centre of the trade between the countries bordering the Indian Ocean and the Far East was the town of Malacca in the Straits. It was also the key of the Spice Islands. Albuquerque, the great Portuguese captain, took the place in 1511, and it remained a Portuguese possession for a hundred and thirty years until the Dutch captured it in their turn in 1641. The Dutch, as was their wont, preserved a strict monopoly against all other nations, and dealt in the tin which even then was worked in the Peninsula. In 1795 this nodal point was taken by the English, was transferred to the Dutch in 1818, and was exchanged for Bencoolen in 1824, when it again came into English hands.

The monopolistic policy of the Dutch and the bad situation of Bencoolen made it necessary for the Company to acquire some post of its own in the Straits of Malacca, which would be at the same time a good shelter for ships, a refitting station, and a base of exchange for products from China and

[1] Rhodesia is not included in this volume, although it is situated in the Tropics and was founded by a Chartered Company. Its history is so intimately bound up with that of the Union of South Africa that it is best treated in connexion with South Africa. Southern Rhodesia, having become a self-governing area, also falls more naturally into the volume dealing with the Dominions and European racial expansion.

the Spice Islands. The Malay Peninsula stands at the gate of the China seas, and guards the approach to the Pacific, and is the natural collecting centre of the Archipelago. It is sheltered from the North-East monsoon by the mountain range down the centre, and from the South-West monsoon by Sumatra.

The Company, therefore, gave instructions to its officers to look out for a suitable port in this region for sheltering, victualling, watering, and refitting its vessels engaged in the China trade, of which, it will be remembered, the Company held a monopoly as far as Englishmen were concerned. Light, a shipmaster, who knew the coast and the state of Kedah, and was on excellent terms with the Sultan, obtained for the Company in 1786 the cession of an island about two-thirds the size of the Isle of Wight, namely the island of Penang. Singapore, another island, was added in 1819, and Malacca in 1824.

From this time onwards, there is a certain similarity, though on a much smaller scale, between the spread of English trade and influence in the Malay Peninsula and in India. British settlements began in both places at a few points along the coast, the intervening spaces were gradually filled in, until the whole was joined together under various forms of British suzerainty.

There was in Malaya, as in India, the same period of chaos, followed by intervention to keep order, and the same transformation of both countries by public works, especially railways. In both countries there has been a stupendous increase of trade, but whereas in Malaya it was rapidly created, so to say, out of nothing, as later in British East Africa, in India it was the development of a connexion extending over centuries, although the articles of commerce almost wholly changed.

There is also a certain similarity between the penetration of East and West Africa, and the extension in Malaya. It was found in both the former regions that to stop the slave trade the back lands must be penetrated and controlled. In Malaya to scotch the piracy, which was the curse of commerce and the ever present danger in the Straits of Malacca, the establishment of some authority that could keep order also led to the acquisition of inland regions. Both West Africa and Malaya were the scenes of a successful attempt to bring British influence to bear through native rulers.

British Malaya is a country not quite as large as England and Wales. Even in 1921 with its 2,358,054 inhabitants it is a sparsely populated country. It is the emptiness of the Peninsula that is the striking contrast with the huge population of India. The ever present question of water which confronts one in India does not arise in Malaya, which is a country of heavy rainfall distributed evenly throughout the year. It is in consequence a country of dense tropical jungle with a spine of mountains running down through the middle of the peninsula. Thus the only highways were the rivers, and these were barred by rapids or falls as one approached the higher altitudes. The west coast is unapproachable for large ships, except at Port Swettenham, owing to the mud and the mangrove swamps, and this accentuated the importance as places of call of the two British islands and explains why the larger part of the trade of the peninsula went through Singapore. The East Coast has special difficulties of communication owing to the North-East monsoon which makes it impossible for ships to frequent the coast between November and March. The ports of this coast-line are also barred by sandbanks.

The characteristic of both sides of the coast is its unapproachability, and in a country of this type the railway is all important. It can bring goods to the few ports that can be used by large vessels, and on the East it will enable goods to be carried all the year round. When a railway exists, communications are no longer barred by the mountain range or the impossibility of getting coastal craft during the monsoon.

In a country where every town, settlement, plantation, road, mine, and railway, has had to be hacked out of the jungle, a flourishing colony has been created, and a trade where the total exports and imports totalled £297,901 in 1875 rose in 1915 to £26,106,872, and in 1920 to £53,577,746.[1]

A pirate's haunt, the island of Singapore has been made into one of the great shipping bases of the world where goods are received from all neighbouring lands—Java, Sumatra, Borneo, China, and Hong-Kong—and are re-distributed throughout the world. All races and nations seem to meet in the streets of Singapore and every kind of craft, from Chinese junks to the great liners, can be seen in the harbour.

[1] *Federated Malay States Information Agency Handbook*, "Trade and Commerce," 1924, p. 74.

There is a constant coming and going of all races in the Peninsula.

Malaya is a country of anomalies. It imports most of its food, including milk and meat, it imports all its manufactures, it sells two great staples, tin and rubber, the bulk of which goes to the United States.[1]

The fact that no import duties are charged, except on liquor, opium, and petroleum, makes Singapore into the exchange mart as well as the gate of the Far East. The policy of the peninsula has been consistently Free Trade. The revenue of the country has been obtained from export duties on tin and rubber and the farming of opium and gambling licences to the Chinese. The value of its exports greatly exceeds the value of its imports.

Its revenue surpluses have been so substantial that not merely had 2,460 miles of metalled roads been constructed by 1922 out of the surplus, but the total length of the railway lines in 1922 was 1,022 miles (reduced to single track) and of running lines and sidings 1,161 miles, also constructed out of surplus. Thus a dense jungle country, impenetrable before the days of railways and roads, has been made accessible to the planter and the miner out of its own resources.

The Federated Malay States have also lent over four millions sterling to Siam to complete the connexion by rail between Bangkok and Singapore.

The whole of the Western side of the Peninsula is now connected by railways with branches from the main lines to the ports. One railway across the Peninsula has been built and another is in process of building, and a railway down the Eastern side has been begun.

Another anomaly is that the wealth has been created by aliens. Chinese and Europeans working with Chinese labour developed the mines. It was chiefly the Tamils from India, with European planters in control, who developed the plantations, though some of them are owned by the Chinese, and Chinese labourers are an important body of workers. Native peoples of Malay stock have also emigrated from Java and Sumatra, either to work on the

[1] The tin exports to the United States in 1922 were 752,044 pikuls, value $60,768,141, to the United Kingdom 184,962 pikuls, value $14,775,918. Of rubber exports 4,039,616 centals went to the United States value 117 million dollars, and to the United Kingdom 701,262 centals, value 19 million dollars. *F.M.S. Information Agency*, 1924, pp. 68, 71.

plantations or to start growing rubber and coco-nuts on a small scale.

In 1911 the Chinese actually outnumbered the Malays, being 433,244 as against 420,840 Malays, which included the immigrants from Java and Sumatra. The disparity seems to have been rectified by 1921, in that the Chinese were 494,548 as against 510,821 Malays and allied races. The Indians had totalled 172,465 in 1911, and had become 305,219 by 1921.

It will, therefore, be seen that British Malaya is a colony of both India and China.

Unlike India, however, the basis of law and order was not laid in the days of the Company. It was a successful adventure in colonization begun after 1867, when it became a Crown Colony.

British residents were then put into native states and cautioned that they were only to give advice without any possible means of enforcing their good advice. They had to organize a revenue and control expenditure in a place where regular taxes had never been paid, where the ruler took what he liked and when he liked, and where he was only limited by the capacity of the people to pay any more. Slavery had to be put down, thus outraging public opinion while depriving the ruler of valuable capital and the whole of his labour force.

British Malaya is one of the miracles of modern colonization, because it was from the first a tale of bricks without straw with which a magnificent public building has been erected. The revenue was obtained by taxing the industrious Chinaman both in his virtues and his vices. The Malay, being a Mohammedan, did not smoke opium or imbibe alcohol, so these taxes fell on the Chinese. They also provided the tin on which was levied an export duty of 12 per cent in value.

Not merely did a collection of warring states accept British Advisers, but they federated in 1895 and managed their affairs by a joint federal Council after 1909. An outer ring of states has also come under British protection between 1909 and 1914.

British Malaya is, therefore, composed of three divisions. The original Straits Settlements consisted of the islands of Penang and Singapore, to which were added Malacca, Province Wellesley, and the Dindings on the mainland. The Federated Malay States constitute a great block right across the centre of the Peninsula. They are Negri

Sembilan (originally nine states), Selangor, Perak, and bordering the East coast, Pahang. The Protected Malay States lie to the north and south of this block. Those on the north, Trengannu, and Kelantan, Kedah, and Perlis, renounced their suzerainty to Siam and became British protected states in 1909 with Advisers. To the south at the Land's End of the Peninsula and constituting the back land of Singapore, lies the important state of Johore, which became a protected state in 1914.

The actual founding of the Straits Settlements was due, as we have seen, to the desire of the East India Company to have a station on the way to China. The actual policy of free trade, which was pursued from the first, was evolved as a set-off to the monopolistic policy of the Dutch, and Singapore was definitely established on opposite lines to attract trade. Java had been captured by the British in 1811 and was restored in 1818, and Raffles, who had been Governor of Java, was so convinced of the necessity of finding a suitable spot to keep open the trade as against Dutch exclusiveness that he explored the coast and obtained a grant of the pirate-infested jungle island of Singapore from the local chief, the Temengong of Johore. The number of its inhabitants was said to be 150, and there was not an acre of cultivation on the island, the population of which was 425,912 in 1921.[1]

Whether Colonel Farquahar or Raffles actually discovered the island is a matter of dispute, but Raffles made it a matter of effective occupation.

The settlement, an antithesis to the Dutch exclusiveness, was such a success that in 1823, on the occasion of Sir Stamford Raffles' retirement, the settlers expressed themselves as follows :—

" To your unwearied zeal . . . we owe at once the foundation and maintenance of a settlement unparalleled for the liberality of the principles on which it has been established, principles the operation of which has converted in a period short beyond all example a haunt of pirates into the abode of enterprise, security, and opulence." [2]

By 1824 the population had grown to 10,000, and the port was visited by a tonnage of 75,000 ships. Malacca

[1] This includes Labuan, Christmas Island, and the Cocos Keeling Islands. *F.M.S. Information Agency Handbook*, " Trade and Commerce."

[2] Swettenham, *Malaya*, p. 73.

was quite eclipsed as a port by the growing importance of both Penang and Singapore.

In 1863 a Company was formed with a capital of £30,000 to build the Tanjong Pagar docks, afterwards bought by the Government in order to work the docks and railways on one system.

The Government of India was continuously complaining of the cost of the upkeep of the Settlements from the point of view of military and naval expenditure. They would gladly rid themselves of this burden if possible. The settlers were continuously complaining that the Government of India did not understand them or appreciate their difficulties. The Settlements had been used as a dumping ground for Indian convicts, and apart from the objection to this type, the Settlements had to pay the expenses of the upkeep of the gaols. The Settlements wanted to be under the direct rule of England, and as India had no desire to retain them, they became a Crown Colony in 1867, but when taken over they were a region saturated with Indian tradition. Nevertheless, by 1857 Singapore could be described by *The Times* as "the centre and citadel of British power in the Eastern seas and the great house of call between Great Britain and China".[1]

In the independent States of the Peninsula such anarchy and piracy prevailed that the Settlements themselves were threatened, and the piracy which had been sporadic became chronic at a time when these dangers and interruptions had become particularly intolerable owing to the opening of the Suez Canal in 1869 and the increasing importance of the trade with the Far East.

In the State of Perak a certain amount of alluvial tin mining had been carried on at Larut by the Chinese. They were divided into factions and fought each other. All the robbers, thieves, and murderers collected round the mines ready to despoil anyone who had made money. There were also three claimants to the throne, who fought each other, attracting to themselves all the unruly, the disappointed, and the free lances. "The poor groaned and suffered, and there was none to listen to their exceeding bitter cry."[2]

At the mines there were pitched battles, 3,000 being

[1] Quoted Swettenham, ib., p. 81.

[2] Swettenham, ib., p. 119, from which the following account has been taken.

killed in one day, every isolated house had been burnt, and almost every mine had been stopped. The Chinese then took to piracy, and British gunboats could not get at them because they disappeared in the maze of waterways in the mangrove swamps.[1] The net result of these excursions was that about 50 per cent of the crews of the British vessels were invalided and not a single pirate boat or man had been captured.[2] No one was safe. "Almost daily there came reports of vessels pirated and burned, crews murdered, and cargoes stolen."

The normal state of the interior was battle, robbery, murder, and sudden death, and the crew of every small craft that put to sea took their lives in their hands.

Kuala Lumpur, now the seat of Government of the Federated Malay States, with its magnificent official buildings and the centre of the railway net and of the Administration was "a Chinese town with two streets and a considerable number of shops and houses built of adobé and thatched with palm leaves. From this centre there were a few miles of rough unmetalled cart track running north and south to smaller mining camps. For the rest there was unbroken forest and a very sparse population".[3]

Sir F. Swettenham goes on to say, "Standing before an open shed in the market place of Kuala Lumpur and pointing to a kind of table, the Captain of the Chinese said to me, 'That is where I pay for the heads of the enemy; every head brought in and placed on that table is worth $100, and sometimes it has been as much as I could do to count the money fast enough.'"[4]

There were no roads: the highways were the rivers, and on these everyone within reach and every passer-by was taxed and tolled, not merely by one Sultan but by three claimants and all the smaller chiefs. "Every sprig of nobility felt that this squeezing of the peasant and the Chinese was the only way in which a gentleman could condescend to make a living."[5]

The result was that as the Malay peasant had no prospect of enjoying wealth he did not work. Land could be had for nothing. It had no value and anyone could squat where he pleased in the jungle. Fish were obtained very easily,

[1] Ib., p. 125.
[2] Ib., p. 126.
[3] Ib., p. 127.
[4] Ib., p. 131.
[5] Ib., p. 195.

and rice with small exertion at two seasons of the year. Therefore the Malay is constitutionally disinclined to work, although under the Dutch in Java the same racial stock is industrious and is increasing in numbers to such an extent that the people of Java and Sumatra emigrate to British Malaya as labourers or small planters.

The cup of iniquity was full as far as the English were concerned when a British gunboat was attacked, two officers on it wounded, British police stations raided, and a house in the British settlement of Penang blown up. Anarchy was no longer safely barred out of British territory.

A treaty was concluded in 1874 with the Sultan of Perak arranging that his state should receive a British Resident. Peace was also made between the various Chinese factions, and their sphere at the mines deliminated. This policy of attaching a Resident was also pursued with regard to the other states. His function was to give advice, organize a revenue, be responsible for the expenditure, and create a police to keep order.

The state of affairs with which they had to deal has been described as follows :—

" In each state, the ruler, whether he were sultan, raja, or chief of lower rank, was supreme and absolute. His word was law, and oppression and cruelty were the result. Under the ruler were a number of chiefs, usually hereditary, who took their cue from their master, and often out-Heroded Herod in the gratification of their vengeance or the pursuit of their peculiar amusements. The people counted for nothing except as the means of supplying their chiefs with the material for indulging their vicious tendencies; they worked by command and without payment, they were liable to be deprived of anything they possessed that was worth taking, or to be taxed to meet the necessities of the ruler or local chieftain, their wives and daughters were often requisitioned by members of the ruling class, and when they ceased any longer to attract their abductors, these women, often accompanied by other members of their families, went to swell the ranks of the wretched debt slaves, a position from which they probably never escaped, but while they filled it were required to perform all menial duties and were passed from hand to hand in exchange for the amount of the so-called debt, exactly like any other marketable commodity. The murder of a raiyat was a matter of easy settlement, if it ever caused

inquiry . . . the Chinaman was regarded as fair game even by the Malay raiyat who, if he met a Chinaman on a lonely road, would stab him for a few dollars and rest assured that no one would ever trouble to ask how it happened." [1]

The first Resident of Perak, Mr. Birch, was murdered, and Mr. Swettenham (now Sir Frank Swettenham) narrowly escaped with his life. A British force then appeared, not merely in Perak but in other parts, and the chiefs realized that the Residents had a force behind them and that it was advisable to accept advice when tendered. In the opinion of Sir F. Swettenham, a military expedition of this kind was a real benefit. " In the Malaya of those days no amount of good advice, no sacrifice of individual lives, no missionary effort even, could have done so much for the Malays or, to speak candidly, for us as this show of force . . . everyone was treated as a friend who did not conclusively prove himself to be an enemy, and the people had very little feeling in the matter; but the chiefs, who alone had anything to lose by our advent, realized at last that the British power really existed and could make itself felt in a way that was as novel to them as it was disagreeable." [2]

The first Residents had no Residencies, and it was years before a comfortable house was built for them in any state. The following description may perhaps bring home the discomforts of the situation and show the difficulties of establishing law and order as a basis of sound economic development :—

" The police and I lived together in a very unattractive residence ; it was an old stockade with walls made of logs of wood piled one on top of the other, a high pitched roof of palm leaves, very far from watertight, the bare earth for floor and two open spaces at either end for doors. The only path in the village passed right through the stockade, and the smallest effort would throw anything through one door space into the river. Reeds, rank grasses, and jungle undergrowth grew up to the walls, and at high tide, i.e. twice in every twenty-four hours, very little of the mud floor was left uncovered by water.

" The top of the log wall was well above high water mark, and there one could sleep in luxury, except when it rained,

[1] Swettenham, " British Rule in Malaya," *J.R. Col. Inst.*, 1895-6, p. 281.

[2] Ib., p. 279.

and that was on about half the nights in the year. But I have been in worse places, and one of the great advantages of this residence was that you could make a fire anywhere within the walls without fear of burning a hole in the floor, and the log walls afforded an almost inexhaustible supply of fuel. A fire was not required for heating the premises, the temperature varied from 92° F. in the day to about 75° F. or 80° F. at night, but smoke was absolutely necessary to defend oneself against the attacks of the most numerous and blood-thirsty breed of mosquitoes within a thousand miles. So one made plenty of smoke and sat in it. Outside the prospect was singularly unlovely ; a few score of blighted coco-nut palms, with broken and drooping fronds like the plumes of a hearse returning from a disorderly wake, some particularly disreputable and tumble-down huts, the dark brown waters of two deep and eddying streams, and all the rest mud and rank brushwood. When the tide went down and the sun drew a pestilential vapour from the drying ooze, horrible, loathsome crocodiles crawled up the slimy banks to bask in the noisome heat." [1]

The Residents were soon successful in establishing order, and the country developed with amazing rapidity between 1874 and 1900. These years may from the economic point of view be summed up as the mining and railway period. Villages grew like mushrooms, the Chinese flocked in, the tin export mounted steadily, and the revenue from the tin duties also expanded so rapidly that the surpluses provided a system of roads unequalled in the Tropics and the indispensable railway.

" In twelve months a considerable mining town would spring up in the midst of what had been virgin forest, and the Resident would write of roads and railways never before heard of and not to be found on any map." [2]

The taxes on tin and opium were not new, although the amount of their yield was new; but two other sources of revenue emerged in this period, payments for land and the profits of the railways. Courts of justice were set up, debt slavery was abolished,[3] and the land began to be surveyed. With the building of roads and railways land had acquired a new value, land ownership had to be decided and a quit rent paid. Freehold tenure was the type established.

[1] p. 186.
[2] Swettenham, ib., p. 246.
[3] See pp. 174–5.

Thus a people who never before had paid for land now contributed to the land revenue in return for a definite title.

At the tin mines the ore was extracted from alluvial ground by the Chinese with simple appliances. It was a system of domestic mining, and the cost of production was so low that other countries could not compete, and in the year 1895–6 the Peninsula was estimated to produce five-sixths of the tin of the world. The Government made monetary advances to the Chinese, all of which were honestly repaid. Indentured coolies were brought over,[1] and the earliest roads were made to connect the mines with water transport. The first railway line of eight miles was built in 1885 from the tin mines of Larut to Port Weld on the river. It paid 25 per cent profit. The first section of the main line from Batu to Kuala Kubu was opened in 1892–4. The lines have been laid on the metre gauge and have been built by the States themselves, i.e. the state railway engineering departments, and not contractors, have built the lines. Wood has been the principal fuel, but coal was discovered at Rawang in Selangor and is also used.

The increase in the revenues of the two first States that received Residents were remarkable.

	Perak.	*Selangor.*
	$	$
1875	226,233	115,651
1885	1,522,085	566,411
1894	3,542,114	3,334,467

The whole economic development was a gamble which justified itself. The surpluses spent on communications were an excellent investment from the point of view of the country. The order, the facilities for getting about and transporting goods, and the indefeasible title to land attracted immigrants not merely from China, but from the unprotected Malay States, from the Dutch possessions, and from Southern India.

Many of the Chinese worked the ore on a co-operative system. Companies formed by British, Australian, French, and American capitalists came and introduced more elaborate appliances for getting tin, such as hydraulic sluicing. Machinery, steam power, and oil-driven engines are increasing and the amount of ore won by these capitalistic methods

[1] See p. 197 f. The indenture system was abolished in 1914.

tends to out-distance that won by the domestic methods of Chinese mining. They have greatly economized the amount of labour required. But the Chinese are still responsible for about 60 per cent of the ore.[1]

The ore was sent to Singapore and smelted there, but smelting works have also been set up at Penang. The attempt to send unsmelted ore to the United States was prevented by an extra export duty of £3 10*s.* per 400 lbs. on unsmelted ore. This was not, however, levied if the ore went to England or Australia, the earliest example of an imperial preference by a tropical colony. The duty, which was 12 per cent at first, has been made to vary with the price of tin, and ranges from 10 per cent when tin is £100 a ton to 14·9 per cent should it reach £400.

Straits tin is not merely fine quality, but it possesses peculiarly liquid properties when smelted, and this makes it more suitable for the tin-plate industry than any other. As in Cornwall, the tin is found in conjunction with wolfram and china clay, and an attempt is now being made to exploit the latter.

One innovation which tended to keep the peace in the mines was the fact that the Government declared that it owned all the water, and therefore the disputes about the private ownership of water for sluicing and washing were prevented. As towns and villages grew the " public works " developed. Towns had to be supplied with pure water, also drains, markets, laundries, post offices, electric light, telegraphs, hospitals, and schools. At the ports, docks, jetties and other works were started. Rivers had to be cleared and dredged, and irrigation in the rice areas was also undertaken. Metalled roads and buildings meant Government quarries and Government brick-fields, and the Government became involved in a whole series of State undertakings.[2]

Federation seems to be a normal evolution in the British dominions ; the Dominion of Canada, the Commonwealth of Australia, and the Union of South Africa were all the amalgamation of several smaller states into larger ones. In the Tropics, Malaya and the two Nigerias are other instances.[3] The federation of the four central Malay States

[1] *F.M.S. Information Agency Handbook*, " Mining," 1924.
[2] F.M. States. *Report Public Works Dept.*, 1922.
[3] Kenya, Uganda and Tanganyika seem to be in process of forming a union. See p. 503.

came about because the ruling chiefs realized that a large area is more important than a small one. By federation the rich states were able to help the poor ones, so Pahang and Negri Sembilan expected to gain from the pooling of resources. Federation meant that schemes of public works could be carried out on a bigger scale. The building and working of the railways was centralized, and the series of disconnected lines was linked up in all the States. In order to get through traffic, the Federated States even built and leased the railway in Johore, then outside, but now a protected state.

A similar legal code for land was adopted in all the states and was followed by a Mining Code. Large sums were also expended on Surveys, a Forest Department was started, and in 1900 an Institute of Medical Research. The States have instituted Mosquito Destruction Boards and "their success is beyond question" in that by arousing public interest they have paved the way to real progress in anti-malarial work.[1]

A Government geologist has been appointed, and a Department of Scientific Agriculture has been created.

Up to 1900 all the prosperity and even the existence of the country hinged on Chinese labour. The Malay did not desire the joys of honest toil. Realizing that in spite of the presence of tin in every state along the spine of the granite mountains the mines must one day give out, the Government was only too anxious to encourage agricultural development. The country was fertile, with a good rainfall and good roads. Coffee and sugar were both tried and were not very successful. The Chinese grew gambier and pepper in Johore, and the Malays produced rice, but not in sufficient quantities to feed the Chinese as well. Malaya therefore imported rice. Up to 1900 no one could have prophesied that Malaya was going to be a planters' country. Then rubber changed the

[1] The number of deaths from malaria declined in the F.M.S. as follows :—

1920 . .	20,594
1921 . .	17,168
1922 . .	15,570

These figures are all the more striking as the task of dealing with malaria in country areas is far more difficult than in town areas.

"The systematic campaign against Yaws makes good progress. In certain districts the disease has been almost eradicated. The Malays travel long distances to obtain treatment." *F.M.S. Annual Report*, 1923, p. 17.

agricultural situation. In 1900, of the world total of 53,890 tons of rubber, plantation rubber only accounted for 4 tons. In 1922 the world's supply was 379,920 tons, of which 354,980 tons were plantation rubber.[1] The export from the Federated Malay States alone rose from 104 tons in 1905 to 23,720 in 1913, and attained 128,461 tons in 1922.[2] In the Federated Malay States, in which therefore the important rubber planting State of Johore is not included, there were 340,000 agricultural holdings, and rubber *in tapping* was going on on about 140,000 of them.[3]

The seeds brought from Brazil, germinated and nursed at Kew, sent on to Ceylon, from there distributed to Malaya, and grown in the Government gardens at Perak and Singapore, were the basis of the new planting expansion. It was not till 1895 that rubber was started as an estate culture on a large scale.

The growing demand for rubber with the development of motoring caused many of the coffee planters to try rubber. Its success was so striking that the forests were felled, and many districts all over the Peninsula which had hardly been visited by the white man now became flourishing rubber plantations. Roads and railways increased, new villages sprang up, and the port of Singapore prospered with rubber to handle as well as tin. Port Swettenham developed, and so did Penang.

As machinery was coming more and more into the tin mines, Chinese labourers were displaced, and were available for rubber planting. They do not, however, take kindly to agricultural work, they like the more speculative occupations of mining or piracy, and so the Indian labourer was found more suitable for the plantations, and was introduced in large numbers either by the head men or under indenture. The forest has to be cleared and burnt and the young rubber trees protected from being choked by weeds. The Indians were needed for this constant weeding until the practice of growing cover crops developed to retain the surface soil, which is otherwise washed away by the heavy rainfall from a clean weeded surface. In hilly land the ground is terraced to prevent this washing away of the surface soil. Hence the importance of labour, not merely in tapping and

[1] *F.M.S. Information Agency Handbook*, "Rubber Planting," p. 21.
[2] *Report F.M.S.*, 1923, p. 24.
[3] Ib., p. 13.

coagulating the latex, but in cultivation.[1] So much rubber was grown that it resulted in over-production, and a slump and an agreement between the planters to restrict production was tried in 1922. It was worked with the help of the Government and with the approval of the Secretary of State for the Colonies. A standard production for an estate was fixed varying with the price of rubber, and any rubber exported over the permitted amount is subject to a heavy tax.

The export duty on rubber has since 1906 proved to be one of the most important items of the revenue. Experiments in new uses for rubber are now being conducted by the rubber producers, and rubber roads and rubber building materials are becoming possibilities. In the production of this great world staple, with its ever growing importance, Malaya has enormous advantages with the rapid growth of vegetation in a country where heat and rainfall are combined and which is out of the hurricane belt.

Coco-nut growing is also an important agricultural development due to the demand for margarine and other fats. Of the 193,256 acres under coco-nuts, two-thirds were native holdings, but the value of the planters' properties was estimated at £5,000,000.[2] The export in 1922 was approximately 43,333 tons, valued at £1,020,316. The oil palm is also being cultivated in plantations.

"Only a generation ago a small band of Britons was sent to Malaya. Utterly insignificant in number, backed by no armed force to give weight to their words, they had strict orders to advise the native chiefs and not to rule. Civil war raged in the land. To take one step from the beaten jungle was to be lost in a forest which had held men in check from the beginning of time. They were expected to create order from jungle and turn strife to peace.

[1] In 1918 the total labour force on the estates over 100 acres was estimated as follows. *F.M.S. Handbook*, "Trade and Commerce," p. 44.

Indians . .	210,028
Chinese . .	101,345
Malays . .	31,389
Javanese . .	21,538
Others . .	4,264
	368,564

When this is compared with the fact that the labour force in the mines of the Federated States was 86,339 in 1921 and 82,195 in 1922, it will be seen what an attraction to population the planting industry has furnished.

[2] *F.M.S. Handbook*, "Coco-nut Industry in Malaya."

"A hopeless task it might appear, but they brought with them those qualities which have spread the power and influence of Britain throughout the world. In the work of these men will be found the highest examples of this tact, of the scrupulous dealing with the native rulers, and of sound administration which have built up the British Empire; and the progress they made is almost too great to grasp. They found it a land deep in the gloom of an evergreen forest whose darkness covered even darker deeds; for man fought with man, and almost every man's hand was against his fellows. During the course of a generation, thousands of acres were wrested from jungle; thousands of people now live in peace and plenty; a railway stretches from end to end of the land; roads second to none bear motors of every kind, while chiefs, who had never entered each other's country except with sword in hand, met in harmony in conference with the man whose genius had made federation possible . . . And with wealth has come health. In hundreds of square miles malaria, which formerly exacted a heavy toll from Malay and foreigner alike, has been driven out."[1]

It is now half a century since the British Government began, in 1874, to penetrate Malaya. Instead of the all-pervading oppression of the peasant prevalent at that time, he now has something to live for. No longer can he be made a slave; he can own land in peace and is growing rich. No longer do men fear to show any signs of prosperity. The "real Malay" now leads a life which for the first time in his history is worth living. The proceeds of taxation are spent for the benefit of the country, and all feel the quickening effect of roads and railways. Better markets are opened up and new forms of employment have been created in the Government service. Malaya now counts as a world factor with its tin and rubber, and Singapore has become one of, the greatest ports in the world. The development of Malaya is one of the most remarkable of the achievements of British traders, planters, and administrators in the period after 1870 both in the rapidity of the transformation and the success of the undertaking.

II. Nigeria.

With the disappearance of the East India Company in 1857, only one other of the great Chartered Companies remained, the Hudson's Bay Company. Its territories

[1] Watson, *The Prevention of Malaria in the Federated Malay States.*

were taken over by the Government of Canada in 1867, and its monopoly ceased, although it still continued to exist as an ordinary commercial undertaking. It was then assumed that the era of company trading and commercial monopolies was over. The 'eighties, however, witnessed their vigorous revival to perform the same functions as the older companies, namely to pioneer trade in regions which afterwards became part, and a very important part, of the British Empire. In this way Nigeria, a second India of about one-third of her size, Uganda and Kenya, Northern and Southern Rhodesia, and British North Borneo, were added to the dominions of the Crown.

The chartered companies were, historically speaking, an intermediate phase between the *laissez faire* era, when the Government left everything to private enterprise, and the era of constructive imperialism, when it was ready to assume the responsibility for new colonies and was eager to further the development of old colonies. The economic impulse which actuated these new chartered companies arose out of the industrial revolution. The town populations demanded more food, the spindles and looms more raw materials, and the engineering shops more minerals. These economic stimuli, the desire to obtain more markets and the prestige of a wide overseas Empire, led France and Germany to pursue a vigorous colonial policy after 1870, and both these powers began to extend their possessions in Africa and the Pacific. The English Government, on the contrary, held back. It was its declared intention not to acquire another yard of territory in Africa. Meanwhile there arose in England four men of vision, Taubman Goldie, Rhodes, Mackinnon, and Dent, who each in his separate field realized what might be done by the revival of the old company method, and they acted in a semi-officially recognized capacity, and pegged out British claims in Africa and North Borneo.

The economic basis of the Royal Niger Company was the profitable trade to be derived from palm oil and palm kernels, the economic basis of the British South Africa Company was gold mining. The Imperial British East African Company was not a trading company or a mining company, but primarily an administrative company. It intended to dispose of the land and make a profit out of the taxes and the administration. It expected that the value of the land would increase once the British company established order and good government, and that trade would grow and yield

a larger customs revenue. This too, was the character of the British North Borneo Company.

But behind all the possibilities of profit lay an enthusiasm in the promotors for the extension of the British Empire. All three of the great figures who stood at the head of the African companies believed in the importance of Africa to England. They also believed that England was good for Africa, and that she might repeat in Africa the great miracle she had wrought in India, by bringing order out of chaos, freedom instead of slavery, public works instead of civil war. It was through the action of these companies that Britain could claim "effective occupation" which constituted her right to part of East, South, and West Africa at the Congress of Berlin. It is owing to their activities that Great Britain came to own so large a part of Africa, and as they were commercial or land companies with an eye to profits, those parts were not necessarily the worst parts of Africa.

The port of Lagos had been one of the great strongholds of the slave traffic, and the British bought it in 1861 to put down the export of slaves. Beyond that port was the dense swampy coastal belt of Southern Nigeria, in which grew the oil palm-tree. Beyond that line of tropical forest was Northern Nigeria, a more open country suitable for cultivation. It consisted of open prairie or was covered by sparse and low forest. The southern portion was situated in the zone of equatorial rainfall, and the primeval forest was so dense that it formed "almost a wall of giant trees and undergrowth interlaced with creepers." [1] While animal life is scarce in the forests, in the north millions of cattle are kept, the cultivation of ground nuts and yams are prominent features, but the rainfall is small, decreasing towards the Sahara.

Nigeria had been invaded from the north by Arab tribes who carried on a considerable caravan traffic by the northern caravan route. The Arabs could not push south because they had to encounter the belt of the tsetse fly forest which destroyed the horses. Meanwhile, the more primitive pagans had taken refuge from the invaders on the hilltops or had been driven in front of the invaders into the forest belt. Thus to the north lay the more enlightened emirates under Mohammedan rulers, while the south was the country of the pagans who were also interspersed in refuge places in

[1] Sir F. Lugard, "Report on Nigeria," 1920, *Cmd.* 468.

the north. In the south various British firms were trading in oil and kernels. The trade was carried on in barter on " beaches " along the rivers or creeks. The native middlemen brought the palm products by canoe to the traders. Indeed, these native middlemen or " Houses " resented any penetration into the interior. In 1879 the French and the English firms were in close rivalry when the English trading interests found a leader in an engineer officer, Mr. (afterwards Sir George) Taubman Goldie, who was exploring in the Sudan and who had come across to Nigeria in connexion with one of the companies in which he had a family interest. He induced these trading firms to combine into the National African Company so as to put up a united front against the French. These, in their turn formed a more powerful company, which was finally bought out by the British Company, leaving it in sole occupation, and it was on this ground that the Oil Rivers Territory (i.e. the Lower Niger) was allotted to Britain at the Congress of Berlin in 1884, and became the Oil Rivers Protectorate. The Company was able to prove the " effective occupation " which constituted the British claim because they had negotiated hundreds of treaties with the chiefs. The Niger Company soon began to consider the question of extending its trade to the region to the north of the Niger, and began to be very active in negotiating treaties with chiefs so as to secure a prior occupation. It considered that the prosperity of the coastal trade would ultimately depend on the extension of its influence over the interior. As it had no international standing, the Company applied for a charter from the British Government, and obtained it in 1886 after threats by Sir G. Taubman Goldie to sell out to a foreign power. The charter made the Company virtually the agent of the British Government. If the Company then negotiated a treaty of protection with a native power, such a treaty was held to be a treaty concluded with the representative of the British Crown. The Company was allowed under its charter to levy taxes to pay for the administration, but they were not permitted to have a monopoly of trade, and the navigation of the Niger was to be free. As a matter of fact, since the Company had both the administration and the trade in their own hands, they were able to enforce a practical monopoly.[1]

[1] Their agents had to enter into a bond of £1,000 that they would not communicate, without the consent of the Company, any facts, whether commercial, scientific, industrial, or political, in connexion with the

The northern district had been laid waste for centuries by slave raiding, but Barth, the African explorer, described it as very populous in 1860. By the time the Company's agents began to consider the possibilities of the region the slave raids and inter-tribal wars had reduced the population considerably. The Company's agents, therefore, had to penetrate a country which had been devastated by slavery and civil strife, and in which they very often encountered hostility on the part of native chiefs. Such expeditions were, therefore, carried out at no little personal risk. The French and the Germans also began to penetrate the North from Dahomey and from the Cameroons, and it looked as if Southern Nigeria would be ringed in by either French or German territory, as were Gambia and Sierra Leone. It soon became a struggle of treaty-making. If the British secured a treaty with a native chief they had a claim to prior occupation, but the French when they secured a treaty claimed that the chief with whom the British had made a treaty was only the vassal of the French potentate. There really ensued a veritable steeplechase to get to the bend of the Niger River, of which the town of Nikki was the key. A treaty had been concluded with the Sultan of Borgu in 1890, but to make the situation quite definite, Major Lugard (now Sir Frederick Lugard) was dispatched to Nikki to make a fresh treaty. He started later than the French captain Decœur and had to march through two hundred miles of unsettled territory whence it was the boast of the natives that no white man had come out alive, and this march had to be made in all the difficulties of the rainy season.[1] By 10th November, 1896, Nikki was reached, and a treaty concluded. Five days later the French arrived! Other treaties were negotiated on the return southwards, and the British position on the Middle Niger was secured.

The position of a private trading company against two great foreign Governments was so hazardous, that the West African Frontier Force was formed in 1897, and was paid for by the British Government. Chamberlain, who had already advocated the theory of the duty of Britain to develop the undeveloped estates, realized that developing estates needed protection.

Company's business or with regard to the districts with which they had become acquainted when serving under the Company, and that they would not publish any pamphlets, books, or papers on the subject. Sir W. Geary, *West Africa*, 9th Oct., 1920, p. 1298.

[1] Lady Lugard, *A Tropical Dependency*.

As in the days of the East India Company in 1773, Government intervention was soon followed by the separation of the administrative and trading functions. The monopoly of the Royal Niger Company had given rise to many complaints,[1] and the British Company agreed in 1899 to buy the Company out for £865,000. The Company assigned to the Government all its treaties, land, and mining rights, retaining its trading assets and warehouses. The Government assumed the debt of the Company and promised the Company half the royalty on future minerals. In 1900, Northern Nigeria was, therefore, added to the British Crown Colonies. The Niger Company, which distributed 145 per cent in 1900, continued to do a very profitable trade after it became merely commercial; the dividends on its ordinary shares usually yielded 10 per cent up to 1920 with, occasional, bonuses of $7\frac{1}{2}$ and 10 per cent in addition.[2] Unlike the other chartered companies, the Royal Niger had been a great financial success. "It will hardly be disputed that the ability, foresight, and the activity of a single man who in the first instance united, and subsequently for twenty years directed with laborious care the principal British interests on the Niger, a territory was added to the British Empire and a field secured for all time to British trade which without his personal exertions would assuredly have passed into the possession of France and Germany." [3]

Thus, as in India, the flank of the invader on the north was turned by a maritime nation pushing in from the south.

Other big firms soon appeared as traders on the Niger, Levers and the Africa and Eastern Trading Corporation being two of the more important firms. The former bought up the Niger Company in 1920.

After the taking over of Nigeria by the British Government, the evolution was much the same as that of India. While in India whole areas had been laid desolate by the invasions and internal wars, so in Nigeria the northern regions had been laid desolate by the slave trade. There was the same problem of the establishment of order, the same attempt to organize a revenue to pay for it—in both cases a development of direct taxation—there was the same collecting of the revenue in kind at first, and the same attempt to introduce a money economy and a coinage. In both countries

[1] *C.* 9372 (1899).
[2] *Stock Exchange Year Book*, 1923.
[3] Lady Lugard, op. cit.

there was the desire to find some basis for trade, and while in India it led to the development of indigo, jute, tea, and cotton, in Nigeria it is leading to the development of cotton, hides, ground nuts and kola nuts, as well as palm oil. The stage of public works, which has been so conspicuous a development of India, is only just beginning in Nigeria, but as the railways of Nigeria were started in the period of reaction from *laissez faire*, they were state railways from the first. In India they were first constructed under a guarantee of interest from the State. The great irrigation works which distinguish India have not yet begun in Nigeria because there is not there as yet the same pressure of the population on the land as in India. In India the problem of alternative employment for freed slaves was solved by the public works and the railways. In Nigeria the railways and the Udi coal-field also provided an outlet for free labour.

There is an analogy with the island of Bombay in the island of Lagos, and Calcutta in the Ganges delta requiring constant dredging to keep the channel open has its parallel in Port Harcourt in the Niger delta, with much the same problem of river sand-banks and silt. Both regions resemble each other in the gradual abolition of internal tariffs, and the creation of internal economic unity.

The taking over of Nigeria by the Government came at a time when the knowledge as to the prevention of malaria began to spread. Prior to that there was a feeling of hopelessness about service in West Africa. Merchants' agents expected to die soon, administrators did not expect to survive very long. Miss Kingsley was told when inquiring for a return ticket to West Africa that return tickets were not issued—or needed.[1] This prevailing idea of a sure, swift, and unpleasant death would have been very serious for the efficiency of a Government that was just taking over a colony, as so much depends on the Civil Servants and their standard in a tropical colony, had it not been for the new knowledge of tropical medicine. The mosquito campaign came as an antidote to despair. It not merely prevented much illness but, more valuable still, it gave hope, and it was possible to get a better type of man both for the Government and for commercial work. Nevertheless, there are not more than 4,000 whites in this colony, and there is therefore no clash between the races, as the country is not suitable for permanent white settlement.

[1] See also p. 251, n. 2.

The Government did not establish its authority in the north without war, and considerable grants-in-aid were necessary. In the south, however, the revenue, chiefly from the customs, more than sufficed for the expenses, and it was therefore proposed to amalgamate both regions. The south needs to draw much of its food supply from the north, and the trade outlet of the north lies through the southern ports. It was also essential that the railways should work as part of the same system. The older colony of Lagos was amalgamated with Southern Nigeria in 1906, and the two Nigerias were joined in 1914. Thus the largest tropical colony outside India was formed.[1]

The suppression of slavery was one of the first tasks to be undertaken. In the north every child born after 1901 was to be absolutely free, slave trading was made an offence, and although slave owning was not illegal any slave could claim his freedom. Slaves were encouraged to ransom themselves, and the Government gave them land to cultivate. In Southern Nigeria the slaves were emancipated outright in 1901, but as it was very difficult to penetrate the forests, and as there was very little alternative occupation, it is difficult to know how far this is effective. At all events, railway work, the tin mines, and the coal-field, have provided some alternative occupation. The great slave market Kano is now a great market for ground nuts, and another slave depôt, Karia, is yearly increasing in importance as a cotton centre. In 1902 the destruction of the Aro Fetish, a cult of human sacrifice and slavery which had prevailed through the eastern portion of the south, helped the efforts to abolish slavery.

"Generally speaking, it may be said to-day that there are no slaves in the Moslem states who are not well aware that they can assert their freedom if they choose, that the native courts deal liberally and impartially with all cases, and that the masters not only acquiesce, but increasingly recognize the advantages of free labour, while all persons under 18 years of age are free-born. In Sokoto, which received tribute in slaves, and where at the time of its conquest, in 1903, the great majority of the labouring class were slaves and the masters most tenacious of their rights under Moslem

[1] Tanganyika is possibly larger being estimated at 365,000 square miles, but Nigeria is now said to be 367,928 square miles (*Ann. Rep.*, 1924, No. 1,197). The areas of both are not yet fully surveyed or the boundary fixed. It used to be said before more accurate survey that Nigeria was 500,000 square miles.

law, the registers show 21,711 slaves freed by regular process up to the end of 1917. This represents only a fraction of the number who have gained their freedom. The number thus liberated in the northern provinces increases steadily each year, and exceeded 55,000 at the end of 1917, with 7,212 in that year . . . The example set by the Government of prompt payment to the individual labourer (and not through the intermediary of a chief), the introduction of currency, and the unwearied counsel of the political staff have all contributed to the formation of a free labour market. The former slave owners are appreciating the advantage of being relieved of the responsibility of maintaining their slaves, and the many other disadvantages of the system of slave labour since they can now enforce their contracts in the Courts. Hired labour is now largely employed by them." [1] Sir Frederick goes on to speak of the way in which naked savages employed on the railway and gradually introduced to piece-work had been trained to the idea of free paid labour.

One result of the suppression of the annual forays for slaves is to be seen in the growth of the population, which increased between 1911 and 1921 by 2½ millions. This is all the more remarkable as the influenza epidemic took its terrible toll of lives in Nigeria as elsewhere. There has been a large emigration from French West Africa into British territory.[2]

After the question of slavery, probably the next most important question was that of railways since slaves could no longer be used compulsorily as carriers.[3] Moreover, in the north taxes were paid in kind and were no use unless the Government could transport the products they received to some market The Niger is blocked by rapids for 450 miles above Jebba. "Except at high water, a period of some three months on the Niger, and little more than three weeks on the Upper Benue and tributaries, navigation is precarious, even for shallow-draught vessels, and is impeded by shallows . . . Steamers frequently run aground and occasionally cannot be got off till the next annual rise. The cost of repairs is very heavy, and necessitates the maintenance of large and very costly workshops. Wood fuel is

[1] Lugard's *Report*, op. cit., p. 44.
[2] Clifford, *Address to the Nigerian Council*, 1923, p. 51.
[3] Carriers are still the chief method of transport in Africa off the line of railway.

used, and is moderately cheap, but constant wooding causes delay, and the logs occupy much cargo space. Both steamer and cargo are much damaged by wood sparks [1] . . . Canoe transport is the salvation of the south, and is cheap."

Under these circumstances a railway is the economic salvation of a country and in the north it was especially valuable for purposes of maintaining order. In the south the Government built the railway with consulting engineers, and laid down a substantial line and buildings, but the railway was not cheaply built. In the north, the line was constructed by an engineer-governor, Sir P. Girouard, and the line was built rapidly by the natives in the various districts at an average cost of £3,500 per mile. The section of the railway from Lagos for 125 miles had cost approximately £7,064.[2] The Lagos line, begun in 1895, was opened in 1901 for 122½ miles from Iddo to Ibadan. The railway in the north from Baro, a Niger port, to Kano was begun in 1906, and the southern railway was pushed up to the frontier, where the other railway began.[3] Tin was discovered on the Bauchi plateau, and a branch line was constructed there.[4] In 1912, a deep water port 30–40 feet was discovered up the Bonny Creek; instead of the usual mangrove swamps, it was bordered by red cliffs on which a railway terminus might be based.[5] There was also a large basin for ships and the minimum channel was 700 feet, widening out at the entrance to the harbour to over 1,000 feet. The bar at the entrance showed 21 feet of water at high tide. A railway was run up from the port to the Government mines in the Udi coal-field. It was completed in 1916, and the first truck of coal arrived in May. Meanwhile, coal mining had been begun in 1914,

[1] Lugard, *Report*, p. 85.

[2] *Cd.* 2325.

[3] There are over 1,107 route miles now open, the total number of passengers was, in 1923, 1,786,814 and 523,961 tons of goods were carried. 136 stations were open. On the railway 408 Europeans, 1,579 Africans, and 11,941 artisans and labourers were employed. *Rep.*, 1924, pp. 23–4.

[4] The output in 1923 was 8,374 tons, the value being £1,190,133.

[5] To make a port in a wilderness is not an easy thing, but it shows the modern command of man over obstacles. The first task was to cut down the high cliffs, the spoil from which sufficed to reclaim considerable areas of adjacent swamp and to lay out a model terminal and townships. Segregation was provided for by European and native reservations, separated by a non-residential belt, and houses for the construction staff were rapidly erected. It was not to be expected that the site would be either healthy or attractive at first, and it proved to be infested with every species of biting fly, but when the nearest swamp was reclaimed, the excavations finished, the forest and undergrowth cleared, and gardens and avenues created, it quickly became more salubrious.

and natives came forward in large numbers to work in the mines at piece-work. The colliery paid for all development work out of earnings, and contributed £47,400 to revenue up to 1919.[1] More important still, it supplies cheap coal for the all-important railways, and for the tin mines, and this was invaluable in war time when English coal was unobtainable. Harbour works have also been undertaken at Lagos, £897,000 of the Chamberlain loan of 1899 [2] being devoted to dredging the bar and other works. The depth of water on the bar was only 11 feet, and all cargo had to be conveyed to Forcados, 160 miles distant by sea, and transshipped into branch boats. In 1917, Lagos harbour was dredged to 20 feet, and in 1918 to 21. Main-line steamers now unload at the Customs wharf. Apart from the money saved in transhipment, the benefit to trade has been enormous in saving of time, breakages, and loss in transhipment.

Waterworks for Lagos were completed in 1916, and these, combined with great sanitary activity, led to a decrease in mosquitoes and malaria.

As the forests of Southern Nigeria were in process of gradual extinction, owing to the practice of burning the forest, and as this would have a serious effect on rainfall, an ordinance of 1917 created forest reserves under forestry officers. The whole policy has been to associate the native chiefs and native councils as closely as possible with the administration, and to place native interests first and foremost. The currency was also a problem that had to be tackled. The trading companies carried on a barter trade, and preferred to do this as they made a profit both in buying and selling. But the native did not always want the articles he got in exchange, and had to try and sell them often at a cheaper rate in the local market. Gin was one of the chief articles of barter. The chief unit of currency was the slave. Cowries, horse-shoes, and rods were other articles of currency and the two latter were very cumbersome and heavy. Thirty shillings' worth of rods was one man's load. In 1900 there was hardly a coin in circulation among natives, but after that date the use of silver spread so rapidly that in 1911 West Africa absorbed £874,850 of silver out of £1,219,766 issued in the United Kingdom. An inquiry was held, and a

[1] In 1923 the output of coal was 170,683 tons. There is very little ash, and the quality is good.

[2] 62 and 63 Vict. c. 36.

special currency was minted for Nigeria and the Gold Coast.[1] The growing use of coin has greatly facilitated trade and exchange. The whole prosperity of Nigeria is no longer based exclusively on palm oil and kernels—ground nuts, hides, tin, kola-nuts, and cotton are also becoming important and therefore the great insecurity of a dependence on one tropical product only is being minimized.

"In Nigeria in 1902," Sir Frederick Lugard says, "slave raiding armies of 10,000 or 15,000 men laid waste the country and wiped out its population annually in the quest for slaves. Hundreds of square miles of rich well-watered land were depopulated. Barth bore witness to a similar condition of things fifty years ago. Men were impaled in the market-place of Kano. The prisons were places of horror. Nowhere was there security for life and property. To-day the native Emirs vie with each other in the progress of their schools; the native courts administer justice and themselves have liberated over 50,000 slaves. The Sultan of Sokoto and the other Emirs are keenly interested in such questions as afforestation, artesian well boring, and vaccination." He continues, "Similar results may be seen in every other British dependency in tropical Africa."[2] The Intelligence Commissioner from Southern Nigeria reported after visiting Northern Nigeria that along 1,000 miles of road he only heard of one case of robbery. A woman travelling by herself for 22 miles was asked if she were not afraid; she replied, "No, not since the white man made the road."[3] The reserves of the Native Territories of the Northern Provinces now total nearly £900,000, much of which is being applied to roads, bridges, and the development of communications." It is now possible to make almost a complete tour of the Northern Provinces by car, and, for local work, motor transport has practically everywhere superseded slower and more primitive methods.[4]

The happy working of the system of "indirect rule" inaugurated by Sir Frederick Lugard is thus described by his successor: "Everywhere throughout this wide expanse of country, which less than a quarter of a century ago was one of the principal areas in this part of Africa whence a supply of captured slaves was annually brought to market, I found a profoundly peaceful, diligent, prosperous and

[1] *Cd.* 6426, 6477.
[2] *The Dual Mandate*, p. 618.
[3] *Cd.* 4523 (1909), p. 51.
[4] *Report*, 1924, p. 8.

thriving peasantry tilling their fields in complete confidence and security, governed by their own hereditary rulers and living under forms of government which are the natural growth of their own political genius and which owe nothing to exotic systems that have no sanction in local custom and tradition. That an enormous change—a change almost incalculably great—has been effected since the beginning of the present century in the character of the Governments under which these millions of human beings live and move and have their being is, of course, a fact. The salient feature, however, of the system of administration which was inaugurated by Sir G. Taubman Goldie in the days when the Niger Company exercised administrative functions, and which during the past five and twenty years has been gradually extended over the Northern Provinces, is that the change which has been wrought has entailed no abrupt or violent departure from established custom or tradition ; none save minor alterations in the administrative machinery which had been developed by the people centuries before our Protectorate over them was established ; no material modification even in the laws under which they live save only that the traffic in slaves is no longer sanctioned by them. The change which is so great as to amount to an absolute transformation, affecting alike the social, material, and many of the moral conditions amid which these people live, abides wholly in the manner in which the indigenous system of government is to-day being made to function and in the wholly new spirit in which Emirs and their Chiefs and officials from the Waziri and Galadima to the smallest Village Head are being gradually and patiently taught to discharge the responsibilities and to carry out the duties which devolve upon them under that system." [1]

The importance of this may be realized from the fact that the population of Nigeria, consisting as it does of about 18½ millions, is more than that of the white population of Australia, Canada, the Union of South Africa, and New Zealand all put together.[2] The colony is in size as large as post-war Germany, Belgium, and two-thirds of France. In 1923 its imports and exports totalled £23,129,000, of which the United Kingdom supplied 80 per cent of the imports and took 69 per cent of the exports. Of the total value of the trade 79 per cent was carried in British ships.[3]

[1] Sir H. Clifford, *Address to the Nigerian Council*, 1923.
[2] See *Appendix*.
[3] *Report*, 1924, p. 14.

III. Kenya and Uganda.

Another great region acquired for the Empire by a chartered company consists of three main divisions—the islands of Pemba and Zanzibar with the coastal strip opposite, the colony of British East Africa now called Kenya, and Uganda.

This East African block differed from Nigeria with its great palm-oil staple, and from the highly mineralized Rhodesia in that it seemed to have no economic attractions at all beyond the coastline. Its economic existence was based on ivory, with slave raiding and slave trading to provide slaves to carry the ivory to the coast and furnish labour for the coastal plantations. As the abolition of slavery was one of the main objects of British policy, the chief economic value of the region had to be destroyed and another created *de novo* out of unknown possibilities. British East Africa and Uganda have been from the beginning lands of experimental cultures, and rest on agricultural products. The coastline, it is true, was one continuous coco-nut plantation worked by slave labour, and the island of Zanzibar was famous for its cloves. Because it has been possible for white people to settle in the highlands, and because Indians have followed the white people inland, this region has been an area of the clash of races, and Kenya is a storm centre of the Empire.

As in other parts of East and South Africa, the mountains rise in terraces from the coast. The highlands are suitable for European settlement, but the territory of Kenya is sharply divided into two halves, the Northern and North-Eastern parts to the east of a line drawn from Lake Rudolf to the islands of Lamu are monotonous sandy deserts inhabited by nomadic tribes. To the south of this line is a fertile country, but a tongue of this desert (nyika it is called) 120–200 miles wide extends right through the southern part of the colony, separating the highland plateau from the fertile strip of coast. This makes transport into the interior a difficult matter with carriers, and even a railway has to traverse a large stretch where there is no paying traffic. Large areas of the colony are infested with the tsetse fly. The usual trinity—tsetse, human carriers, slaves—was the result. On the west the highlands slope down to Lake Victoria Nyanza. Beyond this lies the Protectorate of Uganda—a region part forest and rolling down traversed by the Nile and stretching away to the desert and the

Sudan. Uganda and British East Africa may be looked upon as an extension of Egypt and the Sudan, and constitute the back-door of those regions if approached from East Africa. On the other hand it is quite feasible to reach Uganda from Egypt.

It was this proximity to Egypt that led the Khedive to devise a plan for extending his dominions right through to Zanzibar. The British India Navigation Company had established a regular service between Aden and Zanzibar, and the Sultan of Zanzibar preferring to be under the British, offered in 1877 to the Chairman of that Company, Sir William Mackinnon, a lease of the customs and the administration of Zanzibar for seventy years. This proposed cession included the islands of Zanzibar and Pemba and a long coastal strip, part of which afterwards became German East Africa. The Foreign Office of that day would not support Sir William, and he declined the lease. After 1884, the Germans began to be active in East Africa and concluded treaties with various chiefs. It then became necessary to determine what territories were really subject to the Sultan of Zanzibar, and an international commission fixed his boundaries in 1886. In fear of being absorbed by Germany, the Sultan again made an offer to Mackinnon who formed a company to develop what was known as "the British sphere of influence". The Company only intended to manage the strip of coast which they leased from the Sultan for fifty years. To do this with the prestige of the Government behind them, the Imperial British East Africa Association received a royal charter in 1888 to promote "the trade, commerce, and good government" of Zanzibar. The real motives which seem to have weighed with its promoter and the British Government were three—to keep the Germans out of the head waters of the Nile, to destroy the slave trade, and to protect the missionaries. There was very little economic prospect in the country except ivory. The coco-nut plantations of the coast were so badly cultivated that they did little more than yield a subsistence to the native. There was practically no export of copra.

The Company almost at once became involved in a race with the Germans for the sources of the Nile. A much larger area behind the coastal strip was obtained by treaties with native chiefs. The Company also sent expeditions out to explore the country, and these eventually reached the Victoria Nyanza—the source of the Nile—and Uganda. A

German expedition under Karl Peters tried to anticipate the English. The question was finally settled by the Anglo-German agreement of 1890, by which England ceded Heligoland and Germany renounced all claims to territory north of the Tana in Kenya and to Uganda.

The Directors of the Company had not anticipated such a heavy drain on their resources as the government of these large areas implied, and the capital of the Company was too small for the task of developing so huge a territory. Kenya alone is estimated to cover 247,600 sq. miles, rather more than twice the size of Great Britain, and Uganda 121,437 sq. miles.

One has only to read the reports sent home to the Company by Captain (now Sir Frederick) Lugard, who was sent on behalf of the Company into Uganda, to see the appalling difficulties of transport into the interior.[1] One also realizes why slaves were so much in request as carriers when one grasps the enormous difficulty of obtaining free labour and its tendency to desert. Animal transport was often useless owing to the presence of the tsetse fly. It was clear that to hold the interior and to reach the highlands a railway was indispensable, and a railway in such a mountainous country would obviously be very costly to construct. Even for the development of the coastal regions free labour was hard to obtain. The government of the territories involved a heavy outlay without any immediate prospect of a financial return.

Matters became, however, complicated from the financial point of view. When the Sultan of Zanzibar made over his customs duties to the East African Company, they promised to pay him an annual income and defray the costs of the administration. Then, in 1892 the existing import and transit dues were swept away under the Berlin and Brussels Acts, but the Company was allowed to levy a 5 per cent duty (*ad valorem*) on imported goods, part of which was pre-empted to stop slave trading. This international arrangement deprived the Company of a large part of its revenue, and there still remained the problem of paying for a preliminary survey of the railway, towards which the British Government would only promise £20,000, the Sultan's pension, and the Government of the vast interior.

In 1891, even before the loss of revenue, the Company had decided to limit its commitments and was prepared to with-

[1] The Reports may be seen in the Library of Royal Colonial Institute.

draw from Uganda, which was reluctantly taken over by the Foreign Office in 1893. The Company also withdrew from Witu and the English Government constituted another Protectorate out of Witu and the country north of the Tana. It was the Company's intention to confine its activities to the coastline and the islands. Sir Gerald Portal was sent to Uganda in 1894 to furnish a report to Parliament on the situation. He pointed out that the interior needed development, and that if the British Government took it over, its outlet by the coast would be in the hands of the Company, and he recommended that both areas should be under the same type of administration and control. Sir William Mackinnon, the chief prop of the Company, died in 1893, and in 1894 the Company was bought out by the Government for £250,000—the amount of the original capital of the Company. The territory was placed under the Foreign Office and transferred to the Colonial Office in 1905. The Company was thus instrumental in adding both the Uganda and the British East African Protectorates and Zanzibar to Great Britain's possessions. It had also great humanitarian motives. It prohibited the drink traffic, began the suppression of the slave trade, started industrial missions, constructed roads, and administered justice. Its agents had also done a great deal of exploration work. But it was too much to expect a private company to be able to hold its own against a European power, develop the country, create a new trade from the beginning, and reconstruct the economic life of regions that had been subject to slave raids for the past century—and that with its taxable capacity limited by international agreements.[1]

The next economic event of importance was the starting of the Uganda railway in 1895, which reached the Lake in 1903. There have been three great railways of pre-eminent interest in the British Empire, the Canadian Pacific, the Cape to Cairo, and the Uganda railway. The importance of the latter lies in the fact that its construction was the turning point in British policy in Africa. The railways of Rhodesia and the Canadian Pacific and its branches were built by private capital, the Uganda railway was definitely built by the British and not even the colonial Government. The Government was even then not prepared to say that it would build a railway to develop a colony.

[1] Case of the British East African Company.

It would only say that £250,000 a year had to be found to put down the slave traffic, and the railway would do this much more effectively by making slave caravans unnecessary. The railway was built by the Foreign Office more for political than economic reasons, and the building of the line was coincident with a southward move by Lord Kitchener in Egypt. The battle of Omdurman in 1898 opened the Sudan and cleared the way for penetration from the north, and a railway was built to Khartoum. The Uganda line provided an alternative route from the south, and was a sort of insurance for the control of the all-important Suez Canal. The line is at present 584 miles in length, crosses two great mountain chains, one over 7,000 and one over 8,000 feet, dives down the steep escarpments into the Great Rift Valley, traverses the lands of the once dreaded Masai—a notorious fighting people—passes through the lands of the naked agricultural Kavirondo, and is brought up at a lake 27,000 sq. miles in size, on which it runs a fleet of steamers—the Uganda marine. The difficulties of construction were very great. The carriers died like flies, the lions at times so terrorized the workers that construction was held up.[1] Mules, camels, and rope haulage were employed to get the line up the mountain ranges. In certain parts the natives pulled up the line to make firearms out of the metal and cut down the telegraph lines to decorate their women. Partly in order to build and work the railway the Indians came, and they soon began to trade. They taught the natives that hides had an exchangeable value and they created the native trade.

The line starts at the island of Mombasa, passes through Nairobi, and eventually reaches Lake Victoria at Port Florence. It formed an outlet for Uganda, although it did not penetrate that province. It has become the great artery of traffic not merely for Uganda and British East Africa, but it also carried much of the traffic from German East Africa. It also opened up the highlands to white settlers.

When the railway was in contemplation there was an estimated loss of £18,000 a year on a capital of £2,500,000. Up to 1921 it cost £6,658,112, of which £5,502,592 were found by the Imperial Government. No repayment was arranged for, and the interest is borne by the Imperial Government. The net profit to the Government of Kenya

[1] Patterson, *The Man Eaters of Tsavo.*

has been £2,471,830. The railway has, however, not been managed on commercial lines, as no buildings have been renewed or plant replaced, and the railway has now to be equipped *de novo*, the cost of replacement being reckoned at £7,585,860.

Apart from this defect difficulties have arisen with Uganda over the division of the earnings of the railway. The traffic from Uganda supplies practically half the revenue of the railway, and Kenya takes the profit. If the Government of Kenya permits its railway to become decadent because it wants to get more money, and grudges renewals, then Uganda suffers, i.e. if Kenya starves its railway Uganda's outlet is choked, and there are no compensations in the fact that the surplus which should have gone to renewals has gone instead into Kenya's treasury. The report of 1921 on the Uganda railway, from which these facts were taken,[1] recommended that the revenues of the railway should not be a source of general revenue for Kenya, and that it should be managed by a railway council, on which Uganda was equally represented with Kenya, and that the railway budget and the state budget should be quite separate.

A reorganization of the Uganda railway has accordingly been carried out, rates both passenger and export have been reduced, and a loss of £80,870 in 1921 has been turned into a profit of £56,785 in 1922, all of which now goes to the betterment and renewals fund. The reorganization has been carried out with the aid of a loan floated by Kenya in 1921. The railway is being extended through the Uasin Gishu plateau, which it is hoped will be a great cotton country, and it is to be continued into East Uganda, when it will really be a Uganda railway. The ports of Kilindini and Zanzibar are also being improved, and another loan of three millions is contemplated for further railway building.[2]

Indeed, the difficulties with the adjustment of the railway revenues seem to be leading inevitably to the unification of the two provinces. A new customs tariff, the same for both Uganda and Kenya, was adopted in 1922, and became the tariff of Tanganyika in 1923. At the same time a reciprocal agreement was made between these three regions whereby goods, the manufacture or

[1] Col. Hammond's *Report*, 1921.

[2] To keep up to date see *Annual Reports of the Colonies* and the *D.O.T. Annual Report on East Africa.*

produce of any one of them should be allowed free entry into either of the other two. Thus a customs union has been created. The analogy with the two Nigerias is close.

Although the Imperial Government got no return on the £5,500,000, the greater the profit from the railway the smaller the grant-in-aid the Imperial Government had to find. Indeed, so successful was the colony that in 1913 the grant-in-aid was given up. When a colony no longer needs a grant-in-aid it "can speak with its enemy in the gate" and is no longer obliged to listen with humility to the parental admonishments of the Colonial Office. A colony largely determines its own economic life when it is self-supporting. But it must have defence and loans, and hence cannot go too far. Three elements have gone to the making of the colony of Kenya. White settlers were attracted in to settle in the highlands after 1902, and they began experimenting with cattle, coffee, wattle, maize, and, after 1906, sisal hemp. The colony has also proved very suitable for flax cultivation, and sugar planting is being attempted. The second element is the native element. Missionaries and native commissioners had tried the experiment of giving out oil seeds, potatoes, beans, and other seeds, with advice how to sow and reap, and a certain surplus for exchange has been created. Potatoes, for instance, are exported to Aden. Maize grown by natives is also an article of export, and cotton growing is being started in the Kavirondo district. The great problem has been to find profitable crops and to market them as there was no local basis such as palm oil, and the new growths such as coffee or sisal are mere experimental innovations. The result is that the native can buy the scented soap, clothes, bicycles, and cigarettes which now form staple articles of the native trade. Indeed, the prospects of trade in these regions rest on the development of "wants" by the natives.[1] The third element is the Indian, who helped to build and man the railway, and who fills the subordinate clerical posts. His great importance is that he is the intermediary of the native trade. With the friction between the Indians and the white settlers we have already dealt.[2]

[1] *D.O.T. Report*, 1924, p. 26. "The native is a good spender and when once he handles real money it does not take long for him to develop a taste for good quality in his purchases. I look for a very large increase in this trade during the next few years."

[2] See pp. 194–6.

While the railway solved the worst problem of land transport, the sea transport was dependent for a long time on German lines. The German Government gave a subsidy of £90,000 a year to its ships frequenting East Africa. They also called at Mombasa, carried the exports and brought the imports, mainly from Germany. It was said that before 1914 half the population of Mombasa was German. The link that bound this British colony to the outside world was, therefore, almost wholly foreign, but German shipping did provide an outlet for exports without which the colony could not have developed and without which the railway would have been of little value. In 1911 the Union Castle line decided to challenge the German line, even though it was supported by a subsidy. By 1914 the Mombasa trade was nearly five millions sterling in value, the Uganda cotton alone was worth a million, and the harbour had become quite inadequate to deal with the traffic. Not merely has the slave trade been completely stopped, but native reserves are being deliminated, and an educational system based chiefly on the missions is being inaugurated.

The abolition of the status of slavery has been gradual. The Company were more or less bound by the conditions they found in the Zanzibar concession, where slavery was the basis of the economic system. They spent, however, no less than £3,500 in redeeming 1,400 fugitive slaves. In 1890 certain tribes were declared to be incapable of being held as slaves, and all children born after that date were born free. After 1898 this was more strictly enforced, the status of slavery was abolished in 1907, and compensation was paid to the slaves till 1911 for the loss of the protection of their master. The Arabs have suffered severely from these measures, as free labour is so difficult to obtain. Men taken from the low-lying districts round Victoria Nyanza suffer if taken to the highlands, and men recruited in the highlands suffer in the coastal belt. And, anyway, they do not want to work regularly. The question of native labour is another of the many acute controversies of this colony. The white settlers seem to think that the natives have too large reserves and too large a portion of lands suitable for white men. They also desired compulsion to be brought to bear on the native to make him realize the joys and value of honest toil. Although 60 days compulsory labour a year on public works was decreed in 1920 for unoccupied males it was decided in

1921 to define strictly the term "works of a public nature" for which compulsion might be applied.[1] Apart from the difficulty of transferring men from the highlands to the lowlands, and vice versa, the nomad tribes are of no use for agricultural work, the Masai are above it, and the agricultural tribes have all the employment they want at home. The settlers are afraid of importing Indian indentured labour for fear of increasing the Indian element. Native labour exchanges are being instituted on the lines of Rhodesia, where they have proved very useful.

The economic situation in Uganda is somewhat different. Its leading economic characteristics may be summed up as cotton and roads. It has a very intelligent people in one part, the Baganda, who had attained to a high degree of civilization, and already had a good road system when the English arrived. There were many troubles with various religious factions and tribal chiefs at first, but Sir Frederick Lugard pacified the country, and peace has been preserved since 1899.

An experiment was tried by missionaries and officials of giving out cotton seed to the natives. They took to cotton-growing readily, the ubiquitous Indian collected the cotton lint, made advances to the natives, and provided many of the ginneries. The output is calculated to reach 100,000 bales of good quality cotton in 1924. The value of the export of cotton in 1923 was £1,935,000. Plantations of coffee and tobacco have also been established. The roads have been improved and made available for motors, so that if Kenya rests on the railway Uganda rests on motor traffic. There are only two quite short railway lines in the colony in addition to steamers on the various lakes.[2] But the road system is a very fine one, and there is a boast that it is swept from end to end every Monday. The grant-in-aid was £95,000 in 1894–5. It rose in 1899 to £339,000. Altogether the colony received up to 1914–15 £2,548,000 from the British Government in addition [3] to loans for public works such as telegraphs and roads. In 1914–15 the grant-in-aid was only £10,000, and in 1915–16 it ceased altogether. Thus in twenty years a savage country became financially self-supporting.

[1] *Cmd.*, 1509. This was embodied in an Ordinance of 1922. Certain classes are exempt by administrative order from the obligation to manual labour, viz. headmen, teachers, hospital dressers, chief clerks, native clergy, and natives under contract.

[2] *Manchester Guardian Commercial Supplement*, 15th May, 1924, p. 686.

[3] *Admiralty Handbook*, "Uganda."

Even in ten and a half years after the British occupation Uganda was completely changed. "Slavery, with all its attendant miseries, has been abolished in this part of Africa, and thence to the coast; the people have been released from a tyrannous despotism which took no account of human life; and peace and contentment have been given to a much disturbed land. Laws and regulations have been framed giving equal justice to all; courts of criminal and civil jurisdiction have been established throughout the settled districts; the legitimate authority of the kings and chiefs has been upheld, but a curb has been placed on the power they formerly had of tyrannizing over their subjects, and they are showing a remarkable readiness to imbibe Western ideas and rule their people according to our notions of equity and right. The cause of education has been fostered and is making rapid strides, communications have been extended and rendered easy and safe; trade and commerce have been encouraged and are in process of development, and the foundations have been laid of a sound and permanent revenue." [1]

Ten years later Professor Sir W. Simpson spoke of the rapid development he had witnessed in Uganda.[2]

"It was only a short time ago that the inhabitants were trying to exterminate one another in intertribal warfare and were subjects of slave traders, but now the Uganda railway stretched from Mombasa to the shores of the Victoria Nyanza, and throughout the country there were large cattle ranches and sheep farms and the natives were raising large crops of maize and other things for exportation. There were also plantations of copra, coffee, sisal, and wattle, and the immense undertaking of the Magadi soda works . . . Across the lake is the eastern Province, the population, which was a naked one, was growing cotton in patches from half an acre to three acres, and was transporting it to ginneries recently established, from which it was sent away to the Lancashire mills." [3]

[1] "Present day Administration in Uganda," Hayes Sadler, *Proceedings*, 1905, p. 68.

[2] Discussion, *J.R. Soc. Arts*, 5th February, 1915, p. 219. Cf. p. v.

[3] British East Africa, Uganda, Egypt, and the Sudan are all so closely interconnected that it is interesting to find the same refashioning on the borders of Uganda in the Sudan with the same rapidity of change.

Lord Kitchener remade the Sudan in less than two years. The Mahdi swept away everything . . . When Lord Kitchener had driven away his successor the Khalifa, he had a clean sheet to work on. "He had nothing to destroy because everything stood in the hands of one individual and

The opening up of Africa is the greatest miracle of our generation in the extraordinary rapidity of the transformation. In the words of a man who took a large part in this refashioning of the continent: "The self-governing Dominions grew by slow stages from small municipalities to the status of united nations. In India and the Eastern colonies territorial expansion was the slow increment of many decades. But in Africa it was not a matter of expansion from existing nuclei of administration, but of sudden creation and improvization . . . The perspective of history will perhaps show more clearly the magnitude of that task and the opportunity it gave for initiative, almost unprecedented in the annals of the Empire. It was for these pioneers to cope with the internal slave trade, the very existence of which was hardly known in England, to devise their own laws, to set up their courts of justice, to deal with foreign aggression, to create an administration and bring order out of chaos. The funds at their disposal were wholly inadequate, the staff poorly paid, painfully insufficient, and recruited somewhat at haphazard, whether for chartered companies or for Crown dependencies. The areas to be controlled were most of them many times the size of England, with populations numbered in millions, seething with internal strife, and wholly without roads or means of communication." [1]

this individual had vanished. He therefore set to work. He neglected nothing, he dealt with every conceivable subject, and how he succeeded in eighteen months time in giving to the Sudan a thorough and complete organization is impossible to understand. Land settlement, land tenure, inheritance, registration, irrigation, mining regulations, markets, law, and procedure were all settled on a thorough and businesslike basis. The codes of civil and criminal law and procedure seem alone sufficient to have absorbed all his time and yet they are but a tithe of all he did." Decle, "The Development of our British African Empire," *Proceedings*, July, 1905–6, p. 335.

[1] *The Dual Mandate*, p. 607.

CONCLUSION

The Tropics are faced to-day by many of the economic problems that Europe had to face in between the thirteenth and nineteenth centuries, viz. the abolition of feudalism, personal subjection, and the transition from a natural to a money economy. There is the same difficulty between the usurer and the peasant in India that was encountered in Germany and Russia in the past century, and the same problem of the excessive subdivision or *morcellement* of the land that we know in France, Western Germany, Ireland, and the Empire of the Czars.

The sanitary reforms which did so much to increase the well-being, efficiency, and numbers of the population in England and Europe in the late eighteenth and nineteenth centuries find their parallel in the sanitary reforms in India after 1866 and the health movement in the Tropics in the twentieth century. What is the duel between the great plantation and the small native holding but a reproduction of the duel between high farming and the scattered strips of the peasant which went on in England from the fifteenth to the nineteenth century? It does not follow, however, that the Tropics will necessarily evolve along European lines. Both religion and racial tendencies are at present incalculable factors. But a study of the economic development of England and Western Europe does give an understanding of the present problems which confront administrators in the Tropics. Therein lies part of the value of Economic History. When one looks back in English history and sees how civilized persons must have regarded us about 1,900 years ago one need not despair of the Tropics.

One has only to picture a centurion of Ancient Rome camped in the South of England or by the banks of the Thames writing home to his mother and describing the terrible features of this out-of-the-way island to realize that the Tropics appear to us now, much as Sussex or the Thames Valley must have appeared to a Roman

legionary. He would write of the dense forest, of the ague, of the want of decent food, and he would complain of the absence of wine and the atrociousness of the cooking. He would talk of the fogs and the rheumatism, of the terrible greyness and the rain and the mortality among his men. He would wonder why anyone wished to take or keep such a melancholy god-forsaken place. It is true the heathen Briton had the benefit of law and order when you could get at him, but he was an evasive treacherous person who did not appreciate law and order at their proper worth. Communications were shocking—every road had to be made. Above all there was a pestiferous female firebrand called Boadicea, but she had had one flogging and would be dealt with more drastically if she gave more trouble. She had had a Roman education, too, which showed what a mistake it was to educate these savages, especially women. The priests, called Druids, indulged in human sacrifices, which, of course, must be stopped. But how he sighed for a bit of Italian sunshine in these dark forests, how he longed for the blue sea of Naples instead of these horrible moaning, green-grey, yeasting waves, and how he yearned for a little sensible conversation instead of contact with woad-painted or skin-clad pagans.

And yet England to-day is the great civilizer, the bringer of law and order, as was Ancient Rome. Perhaps some part of the Tropics may occupy in the future the place that England holds to-day.

Nevertheless, whatever the far future may hold, the twentieth century from the economic point of view should belong to the Tropical colonies with their enormous potentialities now made available by scientific discoveries and railways. As far as Great Britain is concerned she has been mainly preoccupied during the nineteenth century with the development of the self-governing colonies and India. But it seems inevitable that, in the twentieth century, the Tropical Colonies will constitute one of the chief regions of the supply of food and raw materials and will prove to be some of the most valuable markets of the world.

As one looks back over the past century and a half of Britain's work in the Tropics and Sub-Tropics it is interesting to see how the commercial interest has given way to the recognition of the importance of the native interest. Beginning with the idea of keeping the peace in

order to carry on trade, there has been gradually developed the sense of imperial responsibility for the indigenous inhabitants of these British lands. The result has been that millions of Asiatics and Africans in all stages of evolution have been assisted through the disasters of storm, famine, and disease. Their material welfare is being stimulated through agriculture and railways, and they are being guided either through their chiefs, their own representatives, or British officials to a more secure and varied existence, in which the worst of the physical obstacles arrayed against them have been overcome by British engineers.

It is interesting, too, to trace how the capital for the development of these countries has been largely provided by the British people, while British traders and planters have helped to create the prosperity in the finances without which the series of public works could not have been undertaken.

And, again, it is interesting to see how the financial and joint stock interest in its turn has given way to Government loans, most of which are devoted to economic purposes; that is to say, there was the same transition from the Company to the Colonial Treasury as there was from the merchant to the official. The Tropics cannot do without the trader, the investor, and the economic pioneer, but these no longer decide the policy. They are merely leading and important interests. The extension of the economic functions of Colonial Governments is not the least remarkable part of the history of the British Tropics.

While it will always be a matter of controversy whether a Government can perform economic services as satisfactorily as private persons, there can be little doubt as to the importance of the Government as the protector of native peoples. The demands of the world for the great tropical staples have indissolubly linked up the temperate regions and the Tropics, and the Tropics have become part of a world economy which needs ever increasing supplies of raw materials and food and which is ever looking for new markets for manufacturers. As the shock-absorbers between this world-desire for produce and sale and the primitive races stand the British Colonial Governments.

The underlying romance of the new British Tropical Empire, created in the last century and a half, consists in the fact that it was so largely the outcome of adventures by individual men or joint stock companies in which the

Victorians even surpassed the effort of the great Elizabethans. The interaction of modern commerce, engineering and administration has caused the little manufacturing town-studded island in the grey northern seas to become the centre of a great agricultural, continental, and island Empire in the lands of the sun—an "Empire in trust" for its own inhabitants, Great Britain, and the world.

APPENDIX

1921–

	British Empire.	United Kingd (exclud Irish F
Area, square miles . .	13,357,672	94
Population . . .	449,349,000	44,200
Imports, £000 . . .	2,043,959	1,098
Exports, £000 . . .	1,883,366	885
Total Trade, £000 . .	3,927,325	1,983,

[1] This table has been drawn up by Mr. F. Brown, B.Sc. (E
The figures are intended especially to illustrate the *order*
not obtainable in the present state of our figures and inform
are not *strictly* accurate: they are composed of items take
figures are not available, while the areas of others have ch

		Area.	Population.	
		Sq. miles.	1901.	19
1.	Canada	3,729,665	5,371,315	7,206
2.	Australia	2,974,581	3,773,801	4,455
			150,000 ?	100
3.	Union of South Africa . .	473,089	1,116,806*	1,276
			4,059,018*	4,697
			5,175,824*	5,973
4.	New Zealand	104,751	772,719	1,008
			43,143	49.
5.	Rhodesia, Southern . .	148,575	503,065	771
	Northern . .	291,000	746,000	822
	Together . .	439,575	1,249,065	1,593
6.	Ireland, area of Free State .	27,129	3,221,823	3,139
	area of N. Ireland .	5,457	1,236,952	1,250
	Together . . .	32,586	4,458,775	4,390
7.	Newfoundland . . .	42,734	217,037	238,
8.	Labrador	120,000	3,947	3.

EMPIRE [1]

1910–11.			
Rest of Empire.	British Empire.	United Kingdom (including S. Ireland).	Rest of Empire.
13,263,039	11,447,954	121,391	11,326,563
05,149,000	419,401,371	45,365,599	374,035,772
945,943	1,183,052	743,546	439,506
997,465	1,078,238	614,027	464,211
1,943,408	2,261,290	1,357,573	903,717

the Statistical Department of the London School of Economics.
d *trend* of moment in the British Tropics. Strict accuracy is
ccordingly the figures given for the British Empire as a whole
e nearest available year, and there are some colonies for which
tween the dates for which population and trade figures are given.

Population.	Remarks and Notes.
1921.	
8,788,483	Area includes 3,603,336 land and 126,329 water.
5,436,794	White population only.
59,000	Aboriginal population, roughly estimated.
1,519,488	White or European only.
5,409,092	Native, mixed, and Asiatic only (of which Asiatic about 3 per cent.)
	*Owing to the Boer War, census postponed to 1904.
6,982,580	Total population.
1,218,913	Excluding Maoris and half-castes living as Maoris, as well as all residents of Cook Islands, Niue, and West Samoa.
52,751	Maoris and half-castes living as Maoris.
807,000	Partly estimated. The white population is as follows: 1901. 11,032; 1911. 23,582; 1921. 33,620
931,000	Partly estimated. 300 (say) 1,434 3,500
1,738,000	11,332 25,016 37,120
3,222,000 1,272,000 4,494,000	Official estimates of population at middle of year for 1921.
259,259	
3,774	

		Area. Sq. miles.	Population. 1901.	1911.
9.	India, total	1,805,332	294,361,056	315,156,396
	British India	1,094,300	231,259,098	243,933,1
	Native States	711,032	63,101,958	71,223,2
10.	Ceylon	25,481	3,565,954	4,106,3
11.	Federated Malay States	27,506	678,595	1,036,9
12.	Unfederated Malay States	15,605	—	899,9
13.	Straits Settlements	1,600	582,009	722,0
14.	British North Borneo	31,106	104,527	208,1
15.	Sarawak	42,000	—	—
16.	Papua	90,540	350,000	380,0
17.	Hong-Kong	404	386,159	456,7
18.	East Africa—			
	Zanzibar Protectorate	1,020	—	197,
	Uganda Protectorate	121,437	3,500,000	2,843,
	E.A. Protectorate (Kenya)	247,600	4,000,000	2,402,
	Tanganyika Territory (German E.A. mandated)	384,000	—	10,000,
19.	Nyasaland Protectorate	39,315	706,000	970,
20.	Sudan	1,014,400	—	—
21.	Somaliland Protectorate	68,000	153,000	344,
22.	Swaziland	6,536	85,491*	99,
23.	Basutoland	11,716	348,848*	404,
24.	Nigeria—			
	Southern	79,880	4,444,393	7,857,
	Northern	256,200	9,161,700†	9,269,
25.	Gold Coast	80,235	1,486,433	1,501,
26.	Sierra Leone	24,908	1,024,178	1,403,
27.	Gambia	3,619	90,354	146,
28.	British West Indies	12,227	1,577,644	1,688,
29.	Bermuda	19	17,535	18,
30.	British Honduras	8,598	37,479	40,
31.	British Guiana	89,480	293,958	296,0
32.	Iraq (mandated)	143,250	—	—

Population. 1921.	Remarks and Notes.
318,942,480 247,003,293 71,939,187	Area and population of British India and native states; the 1921 area is about 32,000 square miles greater than that stated in earlier reports, due probably to extension of territory or more exact mensuration.
4,497,854	
1,324,890	
1,123,264	
883,769	Includes Singapore, Penang, and Malacca also Labuan.
257,804	Figures do not include Brunei, area about 4,000 sq. m., population 25,454 (1921).
—	Area estimated. There has been no census; population estimated at 500,000 in 1913, and 600,000 in 1921.
275,000	No census ever taken; figures of population are estimates.
625,166	Including the "new territories".
Not stated.	1911 figure is the result of census of 1910.
132,312 (end 1922)	Area includes 16,377 square miles of inland water; the population figure given for 1901 is an estimate for 1903.
2,376,000	The population figure given for 1901 is an estimate for 1903; the census figure for 1911 refers only to "administered provinces".
4,107,000	Area and 1911 population estimated; 1921 "enumerated" population omits provinces now under Belgian administration.
1,188,000*	* 1922.
—	Population "cannot be stated" before 1923, when it was estimated as 5,912,402.
3,071,608	
133,563 498,781	* Owing to Boer War, census postponed to 1904.
8,371,459	Colony and protectorate. Cameroons 31,150 square miles.
10,259,983	Protectorate. † Population given for 1901 based on estimates for 1904.
2,078,043	
1,541,311	
210,530	
1,727,041	
20,127	
45,317	
297,691	Excludes about 10,000 aborigines.
2,849,282‡	‡ 1920.

	Includes Bullion and Specie.	Trade (to nea		
		1901.		
		Imports	Exports	Tot
1.	Canada—	39,126*a*	40,374*a*	79,5
		43,633*b*	43,504*b*	87,1
2.	Australia	42,434	49,696	92,1
3.	Union of South Africa (so far as available in 1901) (excluding specie in 1921: small, in any case, in that year)	34,180	12,940	47,1
4.	New Zealand	11,818	12,881	24,6
5.	Rhodesia, for 1901 mostly included in figures for Union of South Africa—Southern	1,443	—	—
	Northern	—	—	—
6.	Ireland. No figures for 1901. It is hardly possible to give separate trade figures for N. and S. Ireland	—	—	—
7.	Newfoundland	1,536	1,718	3,2
8.	India (British) by sea	72,921	90,911	163,8
	(this line excludes bullion and specie) by land	4,600	4,017	8,6
9.	Ceylon	7,508	5,994	13,5
10.	Federated Malay States (excluding bullion)	—	—	—
11.	Unfederated Malay States	—	—	—
12.	Straits Settlements	29,921	25,650	55,5
13.	British North Borneo	—	—	—
14.	Sarawak	—	—	—
15.	Papua { 1900–1, etc.	72	50	1
	{ 1901–2, etc.	71	68	1
16.	Hong-Kong	No custom house, therefore no retu		
17.	Zanzibar	1,197	1,169	2,3
18.	Uganda	63	32	
19.	Kenya	421	96	5
20.	Tanganyika (excluding bullion)	—	—	—
21.	Nyasaland	138	22	1

* Thousand *dollars*, year ending March, 1921.
† Thousand *dollars*, year ending March, 1922.
‡ Thousand *rupees* in 1921.
§ Calendar year, 1921.

00, unless otherwise stated, when to nearest $000, R. 000, etc.).

1911.			1921.		
Imports	Exports	Total	Imports	Exports	Total
114,971*c*	64,815*c*	179,786*c*	1,210,428*	1,240,159*	2,450,587*
142,251*d*	80,831*d*	223,082*d*	753,927†	747,804†	1,501,731†
66,967	79,482	146,449	(1920–1) 163,802	132,159	295,961
			(1921–2) 103,066	127,846	230,912
38,035	57,308	95,343	57,800	74,354	132,154
19,546	19,028	38,574	42,942	44,829	87,771
2,975	3,098	6,073	3,879†	4,628†	8,507†
169	128	297	500	616	1,116
67,610	65,071	132,681	118,971	129,621	248,592
2,751	2,462	5,231	(1920–1) 5,962	4,629	10,591
			(1921–2) 3,743	4,004	7,747
131,684	158,909	290,593	3,81,89,87‡	2,93,81,49‡	6,75,71,36‡
6,233	5,274	11,507	16,02,20‡	15,18,78‡	31,20,98‡
10,960	12,135	23,095	26,20,56‡	25,66,00‡	51,86,56‡
—	—	—	12,007	15,745	27,752
—	—	—	—	—	
46,437	39,887	86,324	68,126	58,025	126,151
—	—	—	901	924	1,825
—	—	—	—	—	
203	117	320	1,547	2,555	4,102
235	100	335	485§	173§	658§
custom house, therefore no returns.			81,942	85,673	167,615
1,180	1,193	2,373	2,149	2,165	4,314
625	393	1,018	Included in Kenya.	1,206	—
1,330	1,107	2,437	6,912	5,061	11,973
—	—	—	1,386	1,442	2,828
291	232	523	638	416	1,054

a Year ending June, 1901.
b Year ending June, 1902.
c Year ending March, 1911.
d Year ending March, 1912.

INCLUDES BULLION AND SPECIE.

		TRADE (to nea		
		1901.		
		Imports	Exports	Tota
22.	Sudan		Not stated.	
23.	Somaliland	355	349	70
24.	Swaziland	Included in the Union of S. Africa.		
25.	Basutoland			
26.	Nigeria	2,242	2,236	4,47
27.	Gold Coast	1,795	560	2,35
28.	Sierra Leone	548	304	85
29.	Gambia	253	234	48
30.	British West Indies (where financial year ends June, average of two years taken)	6,878	6,314	13,19
31.	Bermuda	770	98	86
32.	British Honduras (where financial year ends June, average of two years taken)	253	286	53
33.	British Guiana	1,297	1,716	3,01

Hong-Kong Shipping.

	000 tons.		
	1900.	1910.	1922
Entrances	7,022	11,604	14,91
Clearances	?	11,557	14,92

Junks not included 1900, ? other dates.
Junks in 1910, 1½ million tons.

* £E in 1921.

00, unless otherwise stated, when to nearest $000, R. 000, etc.).

	1911.			1921.	
Imports	Exports	Total	Imports	Exports	Total
2,628	1,562	4,190	5,806*	2,057*	7,863*
267	240	507	379†	204†	583†
6,567	6,228	12,795	10,769	8,028	18,797
3,784	3,792	7,576	7,661	6,942	14,603
1,267	1,300	2,567	1,770	1,664	3,434
807	682	1,489	924	793	1,717
11,234	9,959	21,193	20,980	14,357	35,337
546	134	680	1,340	225	1,565
593	552	1,145	948	832	1,780
1,665	2,084	3,749	3,488	3,639	7,127

† 1922.

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